BULLETIN OF THE ACADEMY OF SCIENCES OF THE USSR
DIVISION OF CHEMICAL SCIENCES

1952

Index

IN ENGLISH TRANSLATION

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SECTIONS

	Page
Table of Contents, 1952	1
Author Index, 1952	8
Subject Index, 1952	15
Index and Empirical Formulas of Organic Compounds, 1952	31

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TABLE OF CONTENTS

1952

January-February	Page	Russ. page
Ninety Years of A. M. Butlerov's Theory of Chemical Structure. A. E. Arbuzov	1	3
The Development of Organic Chemistry in the Light of A. M. Butlerov's Teaching. B. A. Arbuzov	13	14
Phenol Compounds of the Inert Gases and Their Analogs. B. A. Nikitin and M. P. Kovalskaya	23	24
Experimental Study of the Electron Density in Crystals. Communication 5. Electron Density of Mg_2Si. N. V. Ageev and L. N. Guseva	31	31
Kinetics of the Polymerization of Compounds Containing a Conjugated Link. Polymerization of Methyl Acrylate. P. S. Shantarovich	41	40
Investigation of Solubility in the Reciprocal System $CaSO_4$–KCl – H_2O at 55°. V. N. Sveshnikova	45	44
Catalytic Oxidation of Ethylene on Magnesium Chromite. L. Ya. Margolis and O. M. Todes	55	52
The Theory of Chromatography on Heterogeneous Surfaces. Communication 1. Determination from Desorption Curves of the Function Expressing the Distribution with Respect to Their Heats of Adsorption of Sites on a Solid Surface. S. Z. Roginsky and M. I. Yanovsky	63	59
The Theory of Chromatography on Heterogeneous Surfaces. Communication 3. Dynamics of the Adsorption of Mixtures on Heterogeneous Surfaces. S. Z. Roginsky and M. I. Yanovsky	69	64
New Method of Synthesizing Trialkoxytitanium Chlorides. O. V. Nogina, R. Kh. Freidlina, and A. N. Nesmeyanov	81	74
Stereoisomeric Sodium Enolates. A. N. Nesmeyanov, B. A. Sazonova, and E. I. Vasilyeva	89	78
Synthesis of Isoxazoles from β-Chlorovinyl Ketones. N. K. Kochetkov, A. N. Nesmeyanov, and N. A. Semenov	97	87
Synthesis of Aromatic Organo-Antimony Compounds by the Aid of Arylazoformates. O. A. Reutov and O. A. Ptitsyna	103	93
Investigations Relating to β-Amino Acids. Synthesis and Reactions of β-Aminobutyric Acid. V. M. Rodionov and N. G. Yartseva	113	103
Synthesis and Characterization of β-(β-Naphthyl)-β-aminopropionic Acid and of Certain of Its Derivatives. Communication 1. V. M. Rodionov and B. I. Kurtev	123	113
Synthesis of 7-Benz[a]anthracenemethanephosphonic and 12-Methyl-7-benz[a]anthracenemethanephosphonic Acids. B. A. Arbuzov and N. P. Grechkin	131	121
Investigation of Anthracene Derivatives. Communication 10. The Relative Activities of the Meso-Carbon Atoms of Anthracene and of 9,10-Dichloroanthracene in Reactions with Oxidizing Agents. B. P. Fedorov and N. V. Ptitsina	135	124
Reactions of Methylcyclohexane and Toluene in Contact with Aluminum Chloride. N. I. Shuikin and L. M. Feofanova	149	137
The Catalytic Hydrocondensation of Carbon Monoxide with Olefins. Communication 7. Effect of the Carbon Monoxide Concentration on the Hydrocondensation Reactions of Carbon Monoxide with Propene and with n-Butene. Ya. T. Eidus, N. D. Zelinsky, K. V. Puzitsky, and N. I. Ershov	157	145

	Page	Russ. page
The Splitting Off of the Elements of Hydrogen Halide from Monohalo Derivatives of Hydrocarbons of the Series C_nH_{2n+2}. A. P. Meshcheryakov and L. V. Petrova	165	152
Isomerization of Alkanes in Presence of $AlCl_3$ under a Pressure of Hydrogen. Communication 1. Isomerization of n-Hexane. M. G. Gonikberg, A. E. Gavrilova, and B. A. Kazansky	171	157
Kinetics of the Dehydration of Alcohols in Presence of Tricalcium Phosphate. L. Kh Freidlin and A. M. Levit	177	163
The Synthesis and Reactions of Vinyl Ethers of Ethanolamines. Communication 2. The Synthesis of Aminoacetals. M. F. Shostakovsky, I. A. Chekulaeva, and N. A. Gershtein	185	172
Macromolecular Compounds. Communication 43. Significance of Acidolysis in the Polyesterification Reaction. V. V. Korshak and S. V. Vinogradova	193	180
Chemical Changes Produced in the Cellulose Macromolecule by Oxidizing Agents. Communication 6. The Presence in Oxycelluloses of Carbonic Ester Groupings and Their Effect on the Estimation of Uronic Carboxyl Groups. E. D. Kaverzneva, V. I. Ivanov, and A. S. Salova	199	185
Discussion		
Answer to the Critics of the New Structural Theory. G. V. Chelintsev	205	190
"Contact Bonds" and the "New Structural Theory". A. N. Nesmeyanov	215	196
Chronicle		
Conference on the problem of the relation between chemical structure and pharmacological activity	223	201
Conference on the basic problems of photographic science	225	202
March-April		
On the 75th Birthday of Academician E. V. Britske	237	209
General and Inorganic Chemistry		
The Periodic Law of D. I. Mendeleev and the Stability of Coordination Compounds. A. A. Grinberg and K. B. Yatsimirsky	239	211
Thermochemistry and Structure of Atoms. Communication 6. Thermochemistry of Boron: Application of the Rule of Thermochemical Logarithmics to Elements of the Third Group of D. I. Mendeleev's System. A. F. Kapustinsky and O. Ya. Samoilov	245	218
Micro-Hardness Method of Studying Intracrystalline Liquation. D. A. Petrov and L. A. Raikovskaya	251	225
Thermodynamic Study of the Systems Cadmium – Zinc, Cadmium – Lead, Cadmium – Tin, Bismuth – Cadmium, Tin – Zinc, and Lead – Tin. V. S. Lyashenko	255	230
Kinetics of Polymerization of Compounds with Conjugated Double Bonds. Polymerization of Methyl Acrylate in Absence of Light. P. S. Shantarovich	265	243
A New Class of Coordination Compounds of Chromium with Amino Acids. L. M. Volshtein	269	248
Organic and Biological Chemistry		
Addition Reactions of Perfluoro-Olefins. I. L. Knunyants and A. V. Fokin	279	261
β-(β'-Naphthyl)-β-aminopropionic Acid and Its Pyrimidine Derivatives. Communication 2. V. M. Rodionov and B. I. Kurtev	285	268
Synthesis of β-Amino-β-cyclohexylpropionic Acid and of Some of Its Derivatives. V. M. Rodionov and T. S. Kiseleva	293	278

	Page	Russ. page
Synthesis of Polycyclic Compounds Related to the Steroids. XI. Researches on the Stereochemistry of Cyclic Compounds. I. Condensation of Divinyl with Citraconic and Mesaconic Acids and Their Esters. Cis-Trans-Isomerism of 1-Methylcyclohexane-1,2-dicarboxylic Acids and Their Esters. I. N. Nazarov and V. F. Kucherov	301	289
Synthesis of Steroid Compounds and of Related Substances. XII. Condensation of Cyclic β-Diketones with Vinyl Ketones, and Transformations of the Resulting Products. I. N. Nazarov and S. I. Zavyalov	309	300
Synthesis of Hydrocarbons of the Cyclobutane Series. Communication 2. 1-Methyl-3-ethylcyclobutane and Di-(3-methylcyclobutyl)-methane. B. A. Kazansky and M. Yu. Lukina	319	314
Effect of the Dimensions of the Elementary Crystallites on the Porosity and Activity of Al_2O_3 Catalysts of Dehydration Reactions. A. M. Rubinshtein, V. E. Vasserberg, and N. A. Pribytkova	325	323
Optical Activity of Cellulose Triacetate. N. M. Bazhenov and M. V. Volkenshtein	333	334
Reactions of Diene Hydrocarbons with Nitroso Compounds. Addition of Buta-1,3-diene to Nitrosobenzene. Communication 1. Yu. A. Arbuzov	339	344
Studies of Quinoline Derivatives. Communication 1. N-Aryl Quaternary Salts of Quinoline Derivatives. G. T. Pilyugin	347	353
Brief Communications		
Reactions of Diene Hydrocarbons with Nitroso Compounds. Reaction of Buta-1,3-diene, 2,3-Dimethylbuta-1,3-diene, and Cyclohexa-1,3-diene with 1-Chloro-1-nitrosocyclohexane. Yu. A. Arbuzov and A. Markovskaya	355	363
Discussion		
Distribution of π-Electron Density and Interatomic Distances. 2. G. V. Bykov	359	367
Chronicle		
240th Anniversary of the Birth of M. V. Lomonosov	367	375
Award of D. I. Mendeleev Prizes for 1951	373	379

May-June

Inorganic and Physical Chemistry		
Electrochemical Behavior of Iron in Oxidizing Media. Communication 3. Cathodic Polarization of Iron in Oxidizing Media. L. Ya. Gurvich and G. V. Akimov	377	385
Mechanical Properties of Alloys of the Magnesium – Cadmium System. E. M. Savitsky and V. V. Baron	383	392
Coordination Numbers and Hydration of the Ions Li^+, Na^+, K^+, Cl^-, Br^- and I^- in Aqueous Solutions O. Ya. Samoilov	389	398
The Natural Sorbents of the Far East. Communication 1. Electron-Microscope Investigations of Natural Sorbents. V. T. Bykov, V. M. Lukyanovich, and L. V. Radushkevich	395	406
The Effect of Alternating Current on the Electrodeposition of Nickel. A. T. Vagramyan and A. A. Sutyagina	399	410
A Study of Oxygen Exchange on Vanadium Catalysts by the Use of O^{18}. L. Ya. Margolis and E. G. Plyshevskaya	403	415
Organic and Biological Chemistry		
Catalytic Hydrogenation of Doubly Unsaturated Compounds Having a Conjugated System of Double Bonds. Communication 1. Hydrogenation of Bisocrotyl. B. A. Kazansky and N. I. Popova	409	422

	Page	Russ page
Preparation of the Ethyl Esters of 1-(3-Bromopropyl)-2-oxocyclopentanecarboxylic Acid and of 1-(3-Chloropropyl)-2-oxocyclopentanecarboxylic Acid. N.D. Zelinsky and N.V. Elagina.	419	433
Acetylene Derivatives. Communication 125. Synthesis of Polycyclic Compounds Related to the Steroids. XIII. Reaction of Carbocyclic Ketones with 1-Acetyl-1-cyclohexene. I.N. Nazarov and S.I. Zavyalov	423	437
Acetylene Derivatives. Communication 126. Synthesis of Polycyclic Compounds Related to the Steroids. XIV. Synthesis of Tetracyclic Ketones Having a Methylcyclopentane B Ring. I.N. Nazarov, V.F. Kucherov, and L.N. Terekhova	427	442
Ethylene Ester of Phosphorochloridodithious Acid, and Related Substances. A.E. Arbuzov and V.M. Zoroastrova	437	453
The Question of the Tautomerism of Isatin. A.E. Arbuzov and M.Sh. Bastanova	443	459
Synthesis and Properties of 1-Alkoxyethyl Esters of Unsaturated Carboxylic Acids ("Acylals"). M.F. Shostakovsky, N.A. Gershtein, Ya.L. Raskin, and L.E. Ostroumova.	453	471
Synthesis of Sulfur Compounds by the Aid of Vinyl Ethers. Communication 5. Some New α,β'- and β,β'-Dialkoxy Derivatives of Diethyl Sulfide. E.N. Prilezhaeva, E.S. Shapiro, and M.F. Shostakovsky.	459	478
Synthesis of the Vinyl Ethers of Higher Fatty Alcohols. M.F. Shostakovsky, B.I. Mikhantyev, and V.A. Neterman.	465	484
Desulfurizing Action of Troshkov Kaolin. E.A. Timofeeva, N.I. Shuikin, and V.M. Klemenova	469	489
Catalytic Alkylation of Ammonia with Halogen Derivatives of Alkanes and Cycloalkanes. Communication 1. V.A. Nekrasova and N.I. Shuikin.	473	495
The Preparation of Styrene by Catalytic Dehydrogenation of the Ethylcyclohexane Fraction of Maikop Gasoline. N.I. Shuikin and I.I. Levitsky.	477	498
Hexadecyl Esters of Certain Inorganic Acids. B.A. Arbuzov and V.S. Vinogradova.	483	505
Viscosity and Structure of Dialkylphosphorous Acids. B.A. Arbuzov and V.S. Vinogradova.	485	507
Cyanin Dyes. Communication 1. Symmetrical N-Arylquinocyanines. G.T. Pilyugin.	491	512
Cyanin Dyes. Communication 2. Asymmetrical Carbocyanines from Derivatives of N-Arylquinaldine and of Benzothiazole. G.T. Pilyugin.	499	520
Macromolecular Compounds. Communication 44. Polyesters of Certain Aromatic Dicarboxylic Acids. V.V. Korshak and T.A. Soboleva	505	526
Macromolecular Compounds. Communication 45. Significance of the Decarboxylation of Dicarboxylic Acids in the Polycondensation Process. V.V. Korshak and S.V. Rogozhin.	509	531
The Reaction of Phosphorus Trichloride with Unsaturated Cyclic Ketones. M.I. Kabachnik and T.Ya. Medved	517	540
The Reactions of Dienic Hydrocarbons with Nitroso Compounds. Addition of 1,3-Butadiene to Nitrosobenzene. Communication 2. Yu.A. Arbuzov.	523	547
Reduction of 1-Phenylpyrrole. Yu.A. Arbuzov and M.M. Garburg	531	556
Brief Communications		
Synthesis and Properties of Allylsilanes: Triallyl-α-naphthylsilane, Triallylcyclohexylsilane, Triallylbutylsilane, and Allyltributylsilane. A.D. Petrov and L.I. Shchukovskaya.	537	564
The Reactions of Dienic Hydrocarbons with Nitroso Compounds. Addition of 2,3-Dimethyl-1,3-butadiene, of 1-Phenyl-1,3-butadiene, and of Bi-1-Cyclohexen-1-yl to Aromatic Nitroso-Compounds. Yu.A. Arbuzov, N.I. Fedyukina, V.V. Shabyrina, and R.I. Shepeleva	539	566

	Page	Russ. page
Chronicle		
Session of the Division of Chemical Sciences Devoted to the 125th Anniversary of the Birth of N. N. Beketov	543	570
Letter to the Editor	547	573
July-August		
Porous Structure of Adsorbents. M. M. Dubinin.	549	577
Natural Sorbents of the Far East. Communication 2. Sorption of Benzene Vapor by Natural Sorbents, and the Structure of the Sorbents. V. T. Bykov	553	583
Role of Inert Diluents in Catalytic Dehydrogenation of Ethylbenzene. N. I. Shuikin and I. I. Levitsky	559	592
Poisoning of Platinum Catalysts with a Low Content of Active Metal on a Carrier, under Conditions of Dehydrogenation Catalysis. Kh. M. Minachev, N. I. Shuikin, and I. D. Rozhdestvenskaya	567	603
Elucidation of the Role of Various Adsorptional Centers in the Reaction of Hydrogenation of Acetylene on Metallic Nickel. Communication I. Study of the Active Surface of Nickel by Means of a Differential Isotope Method. N. P. Keier	577	616
Coordination Numbers of the Ions Mg^{2+}, Ca^{2+}, Sr^{2+}, and Ba^{2+} in Aqueous Solutions. O. Ya. Samoilov	585	627
Study of Systems Containing Hydrogen Peroxide. Communication 2. Thermal Properties and Dehydration of Perhydrates of Sodium Carbonate. S. Z. Makarov and V. N. Chamova	589	632
Mechanism of Reaction of Magnesium Alkyl Halides with β-Silicoalkyl Halides. A. D. Petrov and V. F. Mironov	591	635
Catalytic Alkylation of Ammonia with Halogen Derivatives of Alkanes and Cyclanes. Communication 2. Effect of the Nature of the Halogen and of Its Position in the Molecule on Amination of Alkyl Halides. V. A. Nekrasova and N. I. Shuikin	599	646
Role of Oxygen-Containing Compounds in the Synthesis of Hydrocarbons from Carbon Monoxide and Hydrogen. Yu. B. Kagan, Yu. B. Kryukov, E. V. Kamzolkina, and A. N. Bashkirov	601	649
Reactions of Diene Hydrocarbons with Nitroso Compounds. Addition of Buta-1,3-diene to p-Nitrosotoluene. Yu. A. Arbuzov	607	658
Reactions of Diene Hydrocarbons with Nitroso Compounds. Addition of Cyclohexa-1,3-diene to Nitrosobenzene. Yu. A. Arbuzov and T. A. Mastryukova	613	665
Syntheses of Acetals of Ethylene Glycol. M. F. Shostakovsky, N. A. Gershtein, and Z. S. Volkova	617	671
Synthesis and Polymerization of Vinylcaprolactam. M. F. Shostakovsky, N. A. Medzykhovskaya, and M. G. Zelenskaya	627	682
Synthesis and Transforinations of Vinylcaprolactam. Communication 1. Polymerization in Presence of Hydrogen Peroxide. M. F. Shostakovsky, F. P. Sidelkovskaya, and M. G. Zelenskaya	633	690
New Synthesis of Alkyl Esters of β-Amino Acids. V. M. Rodionov and N. N. Bezinger	637	696
Acetylene Derivatives. Communication 127. Synthesis of Polycyclic Compounds Related to the Steroids. XV. Structure of the Products of Condensation of 2-Methoxybuta-1,3-diene with 1-Methylcyclohex-1-en-6-one and Methyl Methacrylate. I. N. Nazarov and S. I. Zavyalov	643	703
New Data on the Chemistry of Amides of Sulfuric Acid and Trichlorophosphazosulfonaryls. A. V. Kirsanov	649	710
New Method for Synthesis of Phosphinic and Thiophosphinic Acid Esters. Communication II. Addition of Dialkylphosphorous Acids to the Amide and Esters of Methacrylic Acid. A. N. Pudovik and D. Kh. Yarmukhametova	657	721

	Page	Russ. page
Researches in the Field of Phosphorus-Organic Compounds. Reaction of Sulfides of Phosphorus with Alcohols. M. I. Kabachnik and T. A. Mastryukova	661	727
Studies in the Field of Cyanine Dyes. Communication 3. Asymmetrical Carbocyanines from N-Aryl-quinaldine and Indolenine. G. T. Pilyugin	667	736
Ultra-violet Absorption Spectra of Some Derivatives of Pyridine and Nicotine. Communication 3. K. A. Zhukova, M. S. Kondakova, and Ya. L. Goldfarb	673	743
Chemical Transformations of Cellulose Macromolecules Caused by Oxidants. Communication 7. Chemical Transformation of Cellulose Due to Its Oxidation with Sodium Hypochlorite. E. D. Kaverzneva, V. I. Ivanov, and A. S. Salova	681	751
1-Ethinylcyclohexa-1,3-diene and Its Derivatives. A. D. Petrov and A. V. Kulikova	691	763
Synthesis of 1-Aryl-3-hydroxypyrrolidines. Yu. A. Arbuzov and L. I. Khmelnitsky	695	766
September-October		
Esters of "Glycolphosphorous Acids". Communication 1. Compounds Having Five-, Seven-, and Eight-Membered Rings. A. E. Arbuzov and V. M. Zoroastrova	697	770
Esters of "Glycolphosphorous Acids". Communication 2. Compounds Having a Six-Membered Ring. A. E. Arubzov and V. M. Zoroastrova	705	779
N-Substituted Cyclic Esters of Phosphoramidous Acid. A. E. Arbuzov and V. M. Zoroastrova	713	789
Phosphorous Acid Derivatives Containing a Cyclohexyl Radical. A. E. Arbuzov and F. G. Valitova	723	801
Complex Compounds of Phosphorous Esters. Communication 1. Compounds with Copper, Silver, and Gold Salts. A. E. Arbuzov and V. M. Zoroastrova	729	809
Complex Compounds of Phosphorous Esters. Communication 2. Complex Compounds with Platinous Salts. A. E. Arbuzov and V. M. Zoroastrova	737	818
Complex Compounds of Phosphorous Esters. Communication 3. Complex Compounds with Mercury Salts. A. E. Arbuzov and V. M. Zoroastrova	743	826
The Tautomerism of Carbostyril Derivatives. A. E. Arbuzov and M. Sh. Bastonova	747	831
Action of Alkyl Halides on Sodium, Potassium, and Silver Dialkyl Phosphorothioates. A. E. Arbuzov and O. M. Shapshinskaya	755	842
N, N-Diethyl(dialkoxyphosphinyl)-formamides. B. A. Arbuzov and N. I. Rizpolozhensky	759	847
Esters of Ethylphosphonous Acid, and Some of Their Reactions. Communication 1. Full Esters of Ethylphosphonous Acid. B. A. Arbuzov and N. I. Rizpolozhensky	765	854
Viscosity-Structure Relationship for Phosphorous, Phosphoric, Phosphorothionic, and Boric Esters. B. A. Arbuzov and V. S. Vinogradova	773	865
Dipole Moments of N, N-Diethyl(dialkoxyphosphinyl)formamides. B. A. Arbuzov and T. G. Shavsha	781	875
Esters of Alkylphosphonic Acids, and Their Parachors. B. A. Arbuzov and V. S. Vinogradova	787	882
Certain Alkylphosphonothionic, Alkylphosphonoselenoic, Dialkylphosphinic, and Alkylphosphonous Esters, and the Mechanism of Addition to Alkylphosphonous Esters. A. I. Razumov, O. A. Mukhacheva, and Sim-Do-Khen	797	894
A New Method for the Synthesis of Phosphonic and Phosphinic Esters and Their Thio Analogs. Communication 15. Addition of Phenyl- and Alkylphosphonous Esters to Methacrylic and Acrylic Esters. A. N. Pudovik and D. Kh. Yarmukhametova	803	902

	Page	Russ. page
Preparation of Cyclic Acid Chlorides and Mixed Esters Derived from (Alkoxymethyl)ethylene Hydrogen Arsenites and Trimethylene Hydrogen Arsenite. Gilm Kamai and N.A.Chadaeva	807	908
"Phosphonoethylation" and Diene-Synthesis Reactions with Vinylphosphonic Esters. A.N.Pudovik and M.G.Imaev	813	916
Dechlorination of Hexachloroethane by Trialkyl Phosphites. Gilm Kamai	819	923
A New Method for the Synthesis of Phosphonic and Phosphinic Esters and Their Thio Analogs. Communication 12. Addition of Dialkylphosphorous Acids to Unsaturated Dibasic Acids and Their Esters. A.N.Pudovik	821	926
A New Method for the Synthesis of Phosphonic and Phosphinic Esters and Their Thio Analogs. Communication 13. Addition of O,O-Diethyl Hydrogen Phosphorothioite to Ketones and Aldehydes. A.N.Pudovik and G.A.Zametaeva	825	932
A New Method for the Synthesis of Phosphonic and Phosphinic Esters and Their Thio Analogs. Communication 14. New Method for the Synthesis of Amino Phosphonic Esters. A.N.Pudovik and M.V.Korchemkina	831	940
Addition of Dialkylphosphorous Acids and of Their Acid Chlorides to α-Epoxides. A.N.Pudovik and B.E.Evanov	837	947
Ethylphosphonous Esters and Some of Their Reactions. Communication 2. Partial Esters of Ethylphosphonous Acid. B.A.Arbuzov and N.I.Rizpolozhensky	843	956
The Curtius Reaction in the β-Amino Acid Series. V.M.Rodionov and N.N.Bezinger	847	962
Organometallic "Biuret" Protein Complexes. K.T.Poroshin	855	972
Catalytic Hydrocondensation of Carbon Monoxide with Olefins. Communication 8. Hydrocondensation of Carbon Monoxide with 2-Methylpropene. Ya.T.Eidus, K.V.Puzitsky, and M.I.Batuev	859	978
Chronicle		
Conference on the Trans-Effect Principle	863	982
Session in Honor of the Bicentenary of the Foundation of the Science of Physical Chemistry by M.V. Lomonosov	869	988
November-December		
Toward New Successes of Soviet Chemistry	873	993
Adsorption of Gaseous Mixtures. Communication 2. Adsorption of Ethylene and Propylene on Active Charcoal. B.P.Bering and V.V.Serpinsky	877	997
Studies of Capillary Condensation of Vapors in Highly Disperse Systems. Communication 1. Calculation of Capillary Condensation in the Vicinity of Points of Contact of Spherical Particles. L.V.Radushkevich	885	1008
Catalytic Oxidation of Phosphine over a Wide Range of Temperatures. E.A.Andreev and N.N.Kavtaradze	895	1021
Electron Absorption Spectra of Polystyrene and Its Derivatives. M.V.Volkenshtein and N.S.Kolodina	903	1033
Preparation of Trichloroalkoxytitanes from Titanium Tetrachloride and Alcohols. A.N.Nesmeyanov, R.Kh.Freidlina, and O.V.Nogina	907	1037
Synthesis of Aromatic Arsenic-Organic Compounds Through Arylazocarboxylic Salts. O.A.Reutov and Yu.G.Bundel	911	1041
New Data on the Chemistry of Pyrazolone Derivatives. V.M.Rodionov and A.M.Fedorova	917	1049
Acetylene Derivatives. 128. Heterocyclic Compounds. XXIII. Action of Primary Aromatic Amines		

	Page	Russ. page
and α-Aminopyridine on Vinyl Allyl Ketones. Synthesis of Aryl-Substituted γ-Piperidones and 1-(α-Pyridyl)-4-piperidones. I. N. Nazarov, S. G. Matsoyan, and V. A. Rudenko	923	1057
Acetylene Derivatives. 129. Heterocyclic Compounds. XXIV. Transformations of 1-Phenyl-2,5-dimethyl-4-piperidone. I. N. Nazarov, S. G. Matsoyan, and V. A. Rudenko	933	1069
Catalytic Hydrocondensation of Carbon Monoxide with Olefins. Communication 9. Reaction of Methanol and Ethanol with Ethylene. Ya. T. Eidus and I. V. Guseva	939	1075
Synthesis and Properties of Tetrapropylmethane, Tetrabutylmethane, and Tetrahexylsilane. A. D. Petrov and E. A. Chernyshev	945	1082
Behavior of γ-Halogenodialkenyls in the Grignard-Wurtz Synthesis. A. D. Petrov, M. A. Cheltsova, and E. A. Chernyshev	949	1087
Researches on Acetylenic Alcohols and Glycols. Communication 2. Synthesis of Mono- and Di-Acetals of Tetramethylbutindiol. M. F. Shostakovsky and A. V. Bogdanova	955	1094
Indirect Vinylation of Aliphatic Alcohols. M. F. Shostakovsky, B. I. Mikhantyev, and N. N. Ovchinnikova	959	1099
Metallo-Organic "Biuret" Complexes of Protein Breakdown Products. K. T. Poroshin	963	1105
High-Molecular Compounds. Communication 52. Reactions of Polyester Macromolecules with Each Other. V. V. Korshak and S. V. Vinogradova	967	1109
Remarks on "The Theory of Resonance or Mesomerism". Ya. K. Syrkin and M. E. Dyatkina	973	1116
Free Energy and Heat of Dehydration of Crystal-Hydrates of Uranyl Nitrate and Chloride. A. F. Kapustinsky and L. I. Baranova	981	1122
Synthesis of Silicohydrocarbons from β-Silicohalides and Alkyl-Lithium. A. D. Petrov and V. P. Lavrishchev	985	1125
Synthesis and Properties of Unsaturated Silicohydrocarbons: Dimethyldi-(methylallyl)-silane, Methyldi(methylallyl)-silane, Methyltri-(methylallyl)-silane, Tetra-(methylallyl)-silane, Trimethylcyclopentadienylsilane, and Trimethylbut-3-enylsilane. A. D. Petrov and G. I. Nikishin	989	1128
Structure and Certain Properties of Dibenzhydrylthiophen. Ya. L. Goldfarb and M. S. Kondakova	993	1131
Chronicle		
Conference on the Chemistry and Physical Chemistry of High-Molecular Compounds	997	1134
General Meeting of the Division of Chemical Sciences of the Academy of Sciences, USSR, to Celebrate the 75th Birthday of Academician A. E. Arbuzov	1003	1138
Meeting of the Commission for the Editing of D. I. Mendeleev's Scientific Legacy and the Publication of His Works	1005	1139

Ageev, N.V., and L.N.Guseva. Experimental study of the electron density in crystals. 5. Electron density of Mg_2Si, 31.

Akimov, G.V., see Gurvich, L.Ya.

Andreev, E.A., and N.N.Kavtaradze. Catalytic oxidation of phosphine over a wide range of temperatures, 895.

Arbuzov, A.E. Ninety years of A.M.Butlerov's theory of chemical structure, 1.

Arbuzov, A.E., and M.Sh. Bastanova. The question of the tautomerism of isatin, 443.

Arbuzov, A.E., and M.Sh. Bastonova. The tautomerism of carbostyril derivatives, 747.

Arbuzov, A.E., and O.M.Shapshinskaya. Action of alkyl halides on sodium, potassium, and silver dialkylphosphorothioates, 755.

Arbuzov, A.E., and F.G.Valitova. Phosphorous acid derivatives containing a cyclohexyl radical, 723.

Arbuzov, A.E., and V.M.Zoroastrova. Complex compounds of phosphorous esters. 1. Compounds with copper, silver, and gold salts, 729.

Arbuzov, A.E., and V.M.Zoroastrova. Complex compounds of phosphorous esters. 2. Complex compounds with platinous salts, 737.

Arbuzov, A.E., and V.M.Zoroastrova. Complex compounds of phosphorous esters. 3. Complex compounds with mercury salts, 743.

Arbuzov, A.E., and V.M.Zoroastrova. Esters of "glycolphosphorous acids". 1. Compounds having five-, seven-, and eight-membered rings, 697.

Arbuzov, A.E., and V.M.Zoroastrova. Esters of "glycolphosphorous acids". 2. Compounds having a six-membered ring, 705.

Arbuzov, A.E., and V.M.Zoroastrova. Ethylene ester of phosphorochloridodithious acid, and related substances, 437.

Arbuzov, A.E., and V.M.Zoroastrova. N-Substituted cyclic esters of phosphoramidous acids, 713.

Arbuzov, B.A. The development of organic chemistry in the light of A.M.Butlerov's teaching, 13.

Arbuzov, B.A., and N.P.Grechkin. Synthesis of 7-benz[a]anthracenemethanephosphonic and 12-methyl-7-benz[a]anthracenemethanephosphonic acids, 131.

Arbuzov, B.A., and N.I.Rizpolozhensky. N,N-Diethyl-(dialkoxyphosphinyl)-formamides, 759.

Arbuzov, B.A., and N.I.Rizpolozhensky. Ethylphosphonous esters and some of their reactions. 2. Partial esters of ethylphosphonous acid, 843.

Arbuzov, B.A., and T.G.Shavsha. Dipole moments of N,N-diethyl(dialkoxyphosphinyl)formamides, 781.

Arbuzov, B.A., and N.I.Rizpolozhensky. Esters of ethylphosphonous acid, and some of their reactions. 1. Full esters of ethylphosphonous acid, 765.

Arbuzov, B.A., and V.S.Vinogradova. Hexadecyl esters of certain inorganic acids, 483.

Arbuzov, B.A., and V.S.Vinogradova. Viscosity and structure of dialkylphosphorous acids, 485.

Arbuzov, B.A., and V.S.Vinogradova. Viscosity-structure relationship for phosphorous, phosphoric, phosphorothionic, and boric esters, 773.

Arbuzov, B.A., and V.S.Vinogradova. Esters of alkylphosphonic acids, and their parachors, 787.

Arbuzov, Yu.A. Reactions of diene hydrocarbons with nitroso compounds. 1. Addition of buta-1,3-diene to p-nitrosobenzene, 339.

Arbuzov, Yu.A. Reactions of diene hydrocarbons with nitroso compounds. 2. Addition of 1,3-butadiene to nitrosobenzene, 523.

Arbuzov, Yu.A. Reactions of diene hydrocarbons with nitroso compounds. 3. Addition of buta-1,3-diene to p-nitrosotoluene, 607.

Arbuzov, Yu.A., N.L.Fedyukina, V.V.Shabyrina and R.I.Shepeleva. The reactions of diene hydrocarbons with nitroso compounds. Addition of 2,3-dimethyl-1,3-butadiene, of 1-phenyl-1,3-butadiene, and of bi-1-cyclohexen-1-yl to aromatic nitroso compounds, 539.

Arbuzov, Yu.A., and M.M. Garburg. Reduction of 1-phenylpyrrole, 531.

Arbuzov, Yu.A., and L.I.Khmelnitsky. Synthesis of 1-aryl-3-hydroxypyrrolidines, 695.

Arbuzov, Yu.A., and A.Markovskaya. Reactions of diene hydrocarbons with nitroso compounds. Reaction of buta-1,3-diene, 2,3-dimethylbuta-1,3-diene, and cyclohexa-1,3-diene with 1-chloro-1-nitrosocyclohexane, 355.

Arbuzov, Yu.A., and T.A.Mastryukova. Reactions of diene hydrocarbons with nitroso compounds. Addition of cyclohexa-1,3-diene to nitrosobenzene, 613.

Baranova, L.I., see Kapustinsky, A.F.

Baron, V.V., see Savitsky, E.M.

Bashkirov, A.N., see Kagan, Yu.B.

Bastonova, M.Sh., see Arbuzov, A.E.

Batuev, M.I., see Eidus, Ya. T.

Bazhenov, N.M., and M.V.Volkenshtein. Optical activity of cellulose triacetate, 333.

Bering, B.P., and V.V.Serpinsky. Adsorption of gaseous mixtures. 2. Adsorption of ethylene and propylene on active charcoal, 877.

Bezinger, N.N., see Rodionov, V.M.

Bogdanova, A.V., see Shostakovsky, M.F.

Bundel, Yu.G., see Reutov, O.A.

Bykov, G.V. Distribution of π-electron density and interatomic distances. 2. 359.
Bykov, V.T. Natural sorbents of the Far East. 2. Sorption of benzene vapor by natural sorbents, and the structure of sorbents, 553.
Bykov, V.T., V.M.Lukyanovich, and L.V.Radushkevich. Natural sorbents of the Far East. 1. Electron-microscope investigations of natural sorbents, 395.

Chadaeva, N.A., see Kamai, Gilm.
Chamova, V.N., see Makarov, S.Z.
Chekulaeva, I.A., see Shostakovsky, M.P.
Chelintsev, G.V. Answer to the critics of the new structural theory, 205.
Cheltsova, M.A., see Petrov, A.D.
Chernyshev, E.A., see Petrov, A.D.

Dubinin, M.M. Porous structure of adsorbents, 549.
Dyatkina, M.E., see Syrkin, Ya.K.

Eidus, Ya. T., and I.V.Guseva. Catalytic hydrocondensation of carbon monoxide with olefins. 9. Reaction of methanol and ethanol with ethylene, 939.
Eidus, Ya.T., K.V.Puzitsky, and N.I.Ershov. Catalytic hydrocondensation of carbon monoxide with olefins. 7. Effect of the carbon monoxide concentration on the hydrocondensation reactions of carbon monoxide with propene and with n-butene, 157.
Eidus, Ya. T., K.V.Puzitsky, and M.I.Batuev. Catalytic hydrocondensation of carbon monoxide with olefins. 8. Hydrocondensation of carbon monoxide with 2-methylpropene, 859.
Elagina, N.V., see Zelinsky, N.D.
Ershov, N.I., See Eidus, Ya. T.

Fedorov, B.P., and N.V.Ptitsina. Investigation of anthracene derivatives. 10. The relative activities of the meso carbon atom of anthracene and 9,10-dichloroanthracene in reactions with oxidizing agents, 135.
Fedorova, A.M., see Rodionov, V.M.
Fedyukina, N.L., see Arbuzov, Yu.A.
Feofanova, L.M., see Shuikin, N.I.
Fokin, A.V., see Knunyants, I.L.
Freidlina, R.Kh. Letter to the editor, on "Theory of Resonance", 547.
Freidlina, R.Kh., see Nesmeyanov, A.N.
Freidlina, R.Kh., see Nogina, O.V.
Freydlin, L.Kh, and A.M.Levit. Kinetics of the dehydration of alcohols in presence of tricalcium phosphate, 177.

Garburg, M.M., see Arbuzov, Yu.A.
Gavrilov, A.E., see Gonikberg, M.G.
Gershtein, N.A., see Shostakovsky, M.F.
Goldfarb, Ya. L., and M.S.Kondakova. Structure and certain properties of dibenzhydrylthiophen, 993.
Goldfarb, Ya. L., see Zhukova, K.A.
Gonikberg, M.G., A.E.Gavrilov, and B.A.Kazansky. Isomerization of alkanes in presence of $AlCl_3$ under pressure of hydrogen. 1. Isomerization of n-hexane, 171.
Grechkin, N.P., see Arbuzov, B.A.
Grinberg, A.A., and K.B.Yatsimirsky. Periodic law of D.I. Mendeleev and the stability of coordination compounds. 239.
Gurvich, L.Ya., and G.V.Akimov. Electrochemical behavior of iron in oxidizing media. 3. Cathodic polarization of iron in oxidizing media, 377.
Guseva, L.N., see Ageev, N.V.
Guseva, I.V., see Eidus, Ya. T.

Imaev, M.G., see Pudovik, A.N.
Ivanov, B.E., see Pudovik, A.N.
Ivanov, V.I., see Kaverzneva, E.D.

Kabachnik, M.I., and T.A.Mastryukova. Researches in the field of phosphorus-organic compounds. Reaction of sulfides of phosphorus with alcohols, 661.
Kabachnik, M.I., and T.Ya.Medved. The reaction of phosphorus trichloride with unsaturated cyclic ketones. 517.
Kagan, Yu.B., Yu.B.Kryukov, E.V.Kamzolkina, and A.N. Bashkirov. Role of oxygen-containing compounds in the synthesis of hydrocarbons from carbon monoxide and hydrogen, 601.
Kamai, Gilm, Dechlorination of hexachlorethane by trialkylphosphites, 819.
Kamai, Gilm, and N. A. Chadaeva. Preparation of cyclic acid chlorides and mixed esters derived from (alkoxymethyl)ethylene hydrogen arsenites and trimethylene hydrogen arsenite, 807.
Kamzolkina, E.V., see Kagan, Yu.B.
Kapustinsky, A.F., and L.I.Baranova. Free energy and heat of dehydration of crystal hydrates of uranyl nitrate and chloride, 981.
Kapustinsky, A.F., and O.Ya. Samoilov. Thermochemistry and structure of atoms. 6. Thermochemistry of boron. Application of the rule of thermochemical logarithmics to elements of the third group of D.I. Mendeleev's system, 245.
Kaverzneva, E.D., V.I.Ivanov, and A.S.Salova. Chemical changes produced in the cellulose macromolecule by oxidizing agents. 6. The presence in oxycelluloses

of carbonic ester groupings and their effect on the estimation of uronic carboxyl groups, 199.
Kaverzneva, E.D., V.I.Ivanov, and A.S.Salova. Chemical transformations of cellulose macromolecules caused by oxidizing agents. 7. Chemical transformations of cellulose due to its oxidation with sodium hypochlorite, 681.
Kavtaradze, N.N., see Andreev, E.A.
Kazansky, B.A., see Gonikberg, M.G.
Kazansky, B.A. and M.Yu.Lukina. Synthesis of hydrocarbons of the cyclobutane series. 2. 1-Methyl-3-ethylcyclobutane and di-(3-methylcyclobutyl)methane, 319.
Kazansky, B.A., and N.I.Popova. Catalytic hydrogenation of doubly unsaturated compounds having a conjugated system of double bonds. 1. Hydrogenation of biisocrotyl, 409.
Keier, N.P. Elucidation of the role of various adsorptional centers in the reaction of hydrogenation of acetylene on metallic nickel. Study of the active surface of nickel by means of a differential isotope method, 577.
Khmelnitsky, L.I., see Arbuzov, Yu.A.
Kirsanov, A.V. New data on the chemistry of amides of sulfuric acid and trichlorophosphazosulfonaryls, 649.
Kiseleva, T.S., see Rodionov, V.M.
Kleimenova, V.M., see Timofeeva, E.A.
Knunyants, I.L., and A.V.Fokin. Addition reactions of perfluoro olefins, 279.
Kochetkov, N.K., A.N.Nesmeyanov, and N.A.Semenov. Synthesis of isoxazoles from β-chlorovinyl ketones, 97.
Kolodina, N.S., see Volkenshtein, M.V.
Kondakova, M.S., see Goldfarb, Ya. L.
Kondakova, M.S., see Zhukova, K.A.
Korchemkina, M.V., see Pudovik, A.N.
Korshak, V.V., and S.V.Rogozhin. Macromolecular compounds 45. Significance of the decarboxylation of dicarboxylic acids in the polycondensation process, 509.
Korshak, V.V., and T.A.Soboleva. Macromolecular compounds. 44. Polyesters of certain aromatic dicarboxylic acids, 505.
Korshak, V.V., and S.V.Vinogradova. High-molecular compounds. 52. Reactions of polyester macromolecules with each other, 967.
Korshak, V.V., and S.V.Vinogradova. Macromolecular compounds. 43. Significance of acidolysis in the polyesterification reaction, 193.
Kovalskaya, M.P., see Nikitin, B.A.
Kryukov, Yu.B., see Kagan, Yu.B.
Kucherov, V.F., see Nazarov, I.N.
Kulikova, A.V., see Petrov, A.D.
Kurtev, B.I., see Rodionov, V.M.
Lavrishchev, V.P., see Petrov, A.D.
Levit, A.M., see Freydlin, L.Kh.
Levitsky, I.I., see Shuikin, N.I.
Lukina, M.Yu., see Kazansky, B.A.
Lukyanovich, V.M., see Bykov, V.T.
Lyashenko, V.S. Thermodynamic study of the systems cadmium–zinc, cadmium–lead, cadmium–tin, bismuth–cadmium, tin–zinc, and lead–tin, 255.

Makarov, S.Z., and V.N.Chamova. Study of systems containing hydrogen peroxide. 2. Thermal properties of dehydration of perhydrates of sodium carbonate, 589.
Margolis, L.Ya., and E.G.Plyshevskaya. A study of oxygen exchange on vanadium catalysts by the use of O^{18}, 403.
Margolis, L.Ya., and O.M.Todes. Catalytic oxidation of ethylene on magnesium chromite, 55.
Markovskaya, A., see Arbuzov, Yu.A.
Mastryukova, T.A., see Kabachnik, M.I.
Matsoyan, S.G., see Nazarov, I.N.
Medved, T.Ya., see Kabachnik, M.I.
Medzykovskaya, N.A., see Shostakovsky, M.F.
Meshcheryakov, A.P., and L.V.Petrova. The splitting-off of the elements of hydrogen halide from monohalo derivatives of hydrocarbons of the series C_nH_{2n+2}, 165.
Mikhantyev, B.I., see Shostakovsky, M.F.
Minachev, Kh.M., N.I.Shuikin, and I.D.Rozhdestvenskaya. Poisoning of platinum catalysts with a low content of active metal on a carrier under conditions of dehydrogenation catalysis, 567.
Mironov, V.F., see Petrov, A.D.
Mukhacheva, O.A., see Razumov, A.I.

Nazarov, I.N., and V.F.Kucherov. Synthesis of polycyclic compounds related to the steroids. XI. Researches on the stereochemistry of cyclic compounds. I. Condensation of divinyl with citraconic and mesaconic acid and their esters. Cis-trans isomerism of 1-methylcyclohexane-1,2,dicarboxylic acids and their esters, 301.
Nazarov, I.N., S.G.Matsoyan, and V.A.Rudenko. Acetylene derivatives, 128. Heterocyclic compounds. XXIII. Action of primary aromatic amines and α-aminopyridine on vinyl allyl ketones. Synthesis of aryl-substituted γ-piperidones and 1-(α-pyridyl)-4-piperidones, 923.
Nazarov, I.N., S.G.Matsoyan, and V.A.Rudenko. Acetylene derivatives. 129. Heterocyclic compounds. XXIV. Transformations of 1-phenyl-2,5-dimethyl-4-piperidone, 933.
Nazarov, I.N., V.F.Kucherov, and L.N.Terekhova. Acetylene derivatives. 126. Synthesis of polycyclic

compounds related to the steroids. XIV. Synthesis of tetracyclic ketones having a methylcyclopentane B ring, 427.

Nazarov, I.N., and S.I.Zavyalov. Synthesis of steroid compounds and related substances. XII. Condensation of cyclic β-diketones with vinyl ketones, and transformations of the resulting products, 309.

Nazarov, I.N., and S.I.Zavyalov. Synthesis of polycyclic compounds related to the steroids. XIII. Reaction of carbocyclic ketones with 1-acetyl-1-cyclohexene, 423.

Nazarov, I.N., and S.I.Zavylov. Acetylene derivatives. 127. Synthesis of polycyclic compounds related to the steroids. XV. Structure of the products of condensation of 2-methoxybuta-1,3-diene with 1-methylcyclohex-1-en-6-one and methyl methacrylate, 643.

Nekrasova, V.A., and N.I.Shuikin. Catalytic alkylation of ammonia with halogen derivatives of alkanes and cycloalkanes. 1. 473.

Nekrasova, V.A., and N.I.Shuikin. Catalytic alkylation of ammonia with halogen derivatives of alkanes and cyclanes. 2. Effect of the nature of the halogen and of its position in the molecule on amination of alkyl halides, 599.

Nesmeyanov, A.N. "Contact Bonds" and the "New Structural Theory", 215.

Nesmeyanov, A.N., R.Kh. Freidlina, and O.V.Nogina. Preparation of trichloroalkoxytitanes from titanium tetrachloride and alcohols, 907.

Nesmeyanov, A.N., B.A.Sazonova, and E.I.Vasilyeva. Stereoisomeric sodium enolates, 87.

Nesmeyanov, A.N., see Kochetkov, N.K.

Nesmeyanov, A.N., see Nogina, O.V.

Neterman, V.A., see Shostakovsky, M.F.

Nikishin, G.I., see Petrov, A.D.

Nikitin, B.A., and M.P.Kovalskaya. Phenol compounds of the inert gases and their analogs, 23.

Nogina, O.V., R.Kh. Freidlina, and A.N.Nesmeyanov. New method of synthesizing trialkoxytitanium chlorides, 81.

Nogina, O.V., see Nesmeyanov, A.N.

Ostroumova, L.E., see Shostakovsky, M.F.

Ovchinnikova, N.N., see Shostakovsky, M.F.

Petrov, A.D., M.A.Cheltsova, and E.A.Chernyshev. Behavior of γ-halogenodialkenyls in the Grignard-Würtz synthesis, 949.

Petrov, A.D., and E.A.Chernyshev. Synthesis and properties of tetrapropylmethane, tetrabutylmethane, and tetrahexylsilane, 945.

Petrov, A.D., and A.V.Kalikova. 1-Ethinylcyclohexa-1,3-diene and its derivatives, 691.

Petrov, A.D., and V.P.Lavrishchev. Synthesis of silicohydrocarbons from β-silicohalides and alkyl-lithium, 985.

Petrov, A.D., and V.F.Mironov. Mechanism of reaction of magnesium alkyl halides with β-silicoalkyl halides, 591.

Petrov, A.D., and G.I.Nikishin. Synthesis and properties of unsaturated silicohydrocarbons: dimethyldi(methylallyl)silane, methyldi-(methylallyl)-silane, methyltri-(methylallyl)silane, tetra-(methylallyl)silane, trimethylcyclopentadienylsilane, and trimethylbut-3-enylsilane, 989.

Petrov, A.D., and L.L.Shchukovskaya. Synthesis and properties of allylsilanes: triallyl-α-naphthylsilane, triallylbutylsilane, and allyltributylsilane, 537.

Petrov, D.A., and L.A.Raikovskaya. Microhardness method of studying intracrystalline liquation. 1. Nature of the phenomenon of intracrystalline liquation, 251.

Petrova, L.V., see Meshcheryakov, A.P.

Pilyugin, G.T., Cyanine dyes. 1. Symmetrical N-arylquinocyanines, 491.

Pilyugin, G.T. Cyanine dyes. 2. Asymmetrical carbocyanines from derivatives of N-arylquinaldine and of benzothiazole, 499.

Pilyugin, G.T. Cyanine dyes. 3. Asymmetrical carbocyanines from N-arylquinaldine and indolenine, 667.

Pilyugin, G.T. Studies of quinoline derivatives. I. N-Aryl quaternary salts of quinoline derivatives, 347.

Plyshevskaya, E.G., see Margolis, L.Ya.

Popova, N.I., see Kazansky, B.A.

Poroshin, K.T. Metallo-organic "Biuret" complexes of protein breakdown products, 963.

Poroshin, K.T. Organometallic "Biuret" protein complexes, 855.

Pribytkova, N.A., see Rubinshtein, A.M.

Prilezhaeva, E.N., E.S.Shapiro, and M.F.Shostakovsky. Synthesis of sulfur compounds by the aid of vinyl ethers. 5. Some new α,β- and β,β'-dialkoxyderivatives of diethyl sulfides, 459.

Ptitsina, N.V., see Fedorov, B.P.

Ptitsyna, O.A., see Reutov, O.A.

Pudovik, A.N. New method for the synthesis of phosphonic and phosphinic esters and their thio analogs. 12. Addition of dialkylphosphorous acids to unsaturated dibasic acids and their esters, 821.

Pudovik, A.N., and B.E.Ivanov. Addition of dialkylphosphorous acids and of their acid chlorides to α-epoxides, 837.

Pudovik, A.N., and M.G.Imaev. "Phosphonoethylation" and diene-synthesis reactions with vinylphosphonic esters, 813.

Pudovik, A.N., and M.V.Korchemkina. New method for the synthesis of phosphonic and phosphinic esters and their thio analogs. 14. New method for the synthesis of amino phosphonic esters, 831.

Pudovik, A.N., and D.Kh. Yarmukhametova. New method for synthesis of phosphinic acid esters. 11. Addition of dialkylphosphorous acids to the amide

and esters of methacrylic acid, 657.
Pudovik, A.N., and D.Kh. Yarmukhametova. New method for the synthesis of phosphonic and phosphinic esters and their thio analogs. 15. Addition of phenyl- and alkyl- phosphonous esters to methacrylic and acrylic esters, 803.
Pudovik, A.N., and G.A. Zametaeva. New method for the synthesis of phosphonic and phosphinic esters and their thio analogs. 13. Addition of O, O-diethyl hydrogen phosphorothioite to ketones and aldehydes, 825.
Puzitsky, K.V., see Eidus, Ya. T.

Radushkevich, L.V. Studies of capillary condensation of vapors in highly disperse systems. 1. Calculation of capillary condensation in the vicinity of points of contact of spherical particles, 885.
Radushkevich, L.V., see Bykov, V.T.
Raikovskaya, L.A., see Petrov, D.A.
Raskin, Ya. L., see Shostakovsky, M.F.
Razumov, A.I., O.A. Mukhacheva, and Sim-Do-Khen. Certain alkylphosphonothionic, alkylphosphonoselenonic, dialkylphosphinic, and alkylphosphonous esters, and the mechanism of addition to alkylphosphonous esters, 797.
Reutov, O.A., and Yu.G. Bundel. Synthesis of aromatic arsenic-organic compounds through arylazocarboxylic salts, 911.
Reutov, O.A., and O.A. Ptitsyna. Synthesis of aromatic organo-antimony compounds by the aid of arylazoformates, 103.
Rizpolozhensky, N.I., see Arbuzov, B.A.
Rodionov, V.M., and N.N. Bezinger. New synthesis of alkyl esters of β-amino acids, 637.
Rodionov, V.M., and N.N. Bezinger. The Curtius reaction in the β-amino acid series, 847.
Rodionov, V.M., and A.M. Fedorova. New data on the chemistry of pyrazolone derivatives, 917.
Rodionov, V.M., and T.S. Kiseleva. Synthesis of β-amino-β-cyclohexylpropionic acid and some of its derivatives, 293.
Rodionov, V.M., and B.I. Kurtev. Synthesis and characterization of β-(β-naphthyl)-β-aminopropionic acid and certain of its derivatives. 1. 123.
Rodionov, V.M., and B.I. Kurtev. 2-(2'-Naphthyl)-2-aminopropionic acid and its pyrimidine derivatives, 2. 285.
Rodionov, V.M., and N.G. Yartseva. Investigations relating to β-amino acids. Synthesis and reactions of β-aminobutyric acid, 113.
Roginsky, S.Z. and M.I. Yanovsky The theory of chromatography on heterogeneous surfaces. 1. Determination from desorption curves of the function expressing the distribution with respect to their heats of adsorption of sites on a solid surface, 63.
Roginsky, S.Z., and M.I. Yanovsky. The theory of chromatography on heterogeneous surfaces. 3. Dynamics of the adsorption of mixtures on heterogeneous surfaces, 69.
Rogozhin, S.V., see Korshak, V.V.
Rozhdestvenskaya, I.D., see Minachev, Kh. M.
Rubinshtein, A.M., V.E. Vasserberg, and N.A. Pribytkova. Effect of the dimensions of the elementary crystallites on the porosity and activity of Al_2O_3 catalysts of dehydration reactions, 325.
Rudenko, V.A., see Nazarov, I.N.

Salova, A.S., see Kaverzneva, E.D.
Samoilov, O.Ya. Coordination numbers and hydration of the ions Li^+, Na^+, K^+, Cl^-, Br^-, and I^- in aqueous solutions, 389.
Samoilov, O.Ya. Coordination numbers of the ions Mg^{2+}, Ca^{2+}, Sr^{2+}, and Ba^{2+} in aqueous solutions, 585.
Samoilov, O.Ya., see Kapustinsky, A.F.
Savitsky, E.M., and V.V. Baron. Mechanical properties of alloys of the magnesium–cadmium system, 383.
Sazonova, B.A., see Nesmeyanov, A.N.
Semeonov, N.A., see Kochetkov, N.K.
Serpinsky, V.V., see Bering, B.P.
Shabyrina, V.V., see Arbuzov, Yu.A
Shantarovich, P.S. Kinetics of the polymerization of compounds containing a conjugated link. Polymerization of methyl acrylate, 41.
Shantarovich, P.S. Kinetics of polymerization of compounds with conjugated double bonds. Polymerization of methyl acrylate in absence of light. 265.
Shapiro, E.S., see Prilezhaeva, E.N.
Shapshinskaya, O.M., see Arbuzov, A.E.
Shavsha, T.G., see Arbuzov, B.A.
Shchukovskaya, L.L., see Petrov, A.D.
Shepeleva, R.I., see Arbuzov, Yu. A.
Shostakovsky, M.F., and A.V. Bogdanova. Researches on acetylenic alcohols and glycols. 2. Synthesis of mono- and diacetals of tetramethylbutindiol, 955.
Shostakovsky, M.F., I.A. Chekulaeva, and N.A. Gershtein. The synthesis and reactions of vinyl ethers of ethanolamines. 2. The synthesis of aminoacetals, 185.
Shostakovsky, M.F., N.A. Gershtein, and Z.S. Volkova. Synthesis of acetals of ethylene glycol, 617.
Shostakovsky, M.F., B.I. Mikhantyev, and V.A. Neterman. Synthesis of the vinyl ethers of higher fatty alcohols. 465.
Shostakovsky, M.F., B.I. Mikhantyev, and N.N. Ovchinni-

kova. Indirect vinylation of aliphatic alcohols. 959.
Shostakovsky, M.F., N.A.Gershtein, Ya.L.Raskin, and L.E.Ostroumova. Synthesis and properties of α-alkoxyethyl esters of unsaturated carboxylic acids ("acylals"), 453.
Shostakovsky, M.F., N.A.Medzykovskaya, and M.G. Zelenskaya. Synthesis and polymerization of vinylcaprolactam, 627.
Shostakovsky, M.F., F.P.Sidelkovskaya, and M.G. Zelenskaya. Synthesis and transformations of vinylcaprolactam. 1. Polymerization in presence of hydrogen peroxide, 633.
Shostakovsky, M.F., see Prilezhaeva, E.N.
Shuikin, N.I., and L.M.Feofanova. Reactions of methylcyclohexane and toluene in contact with aluminum chloride, 149.
Shuikin, N.I., and I.I.Levitsky. The preparation of styrene by catalytic dehydrogenation of the ethylcyclohexane fraction of Maikop gasoline, 477.
Shuikin, N.I., and I.I.Levitsky. Role of inert diluents on catalytic dehydrogenation of ethylbenzene, 559.
Shuikin, N.I., see Minachev, Kh.M.
Shuikin, N.I., see Nekrasova, V.A.
Shuikin, N.I., see Timofeeva, E.A
Sidelkovskaya, F.P., see Shostakovsky, M.F.
Sim-Do-Khen, see Razumov, A.I.
Soboleva, T.A., see Korshak, V.V.
Sutyagina, A.A., see Vagramyan, A.T.
Sveshnikova, V.N. Investigation of solubility in the reciprocal system $CaSO_4$ – KCl – H_2O at 55°, 45.
Syrkin, Ya. K., and M.E.Dyatkina. Remarks on "The theory of resonance or mesomerism", 973.

Terekhova, L.N., see Nazarov, I.N.
Timofeeva, E.A., N.I.Shuikin, and V.M.Kleimenova. Desulfurizing action of Troshkov kaolin, 469.
Todes, O.M., see Margolis, L.Ya.

Vagramyan, A.T., and A.A. Sutyagina. The effect of alternating current on the electrodeposition of nickel, 399.
Valitova, G.F., see Arbuzov, A.E.
Vasilyeva, E.I., see Nesmeyanov, A.N.
Vasserberg, V.E., see Rubinshtein, A.M.
Vinogradova, V.S., see Arbuzov, B.A.
Vinogradova, S.V., see Korshak, V.V.
Volkenshtein, M.V., and N.S.Kolodina. Electron absorption spectra of polystyrene and its derivatives, 903.
Volkenshtein, M.V., see Bazhenov, N.M.
Volkova, Z.S., see Shostakovsky, M.F.
Volshtein, L.M. A new class of coordination compounds of chromium with amino acids, 269.

Yanovsky, M.I., see Roginsky, S.Z.
Yarmukhametova, D.Kh., see Pudovik, A.N.
Yartseva, N.G., see Rodionov, V.M.
Yatsimirsky, K.B., see Grinberg, A.A.

Zametaeva, G.A., see Pudovik, A.N.
Zavyalov, S.I., see Nazarov, I.N.
Zelenskaya, M.G., see Shostakovsky, M.F.
Zelinsky, N.D., and N.V.Elagina. The preparation of the ethyl esters of 1-(3-bromopropyl)-2-oxocyclopentanecarboxylic acid, and of 1-(3-chloropropyl)-2-oxocyclopentanecarboxylic acid, 419.
Zelinsky, N.D., see Eidus, Ya. T.
Zhukova, K.A., M.S.Kondakova, and Ya.L.Goldfarb. Ultraviolet absorption spectra of some derivatives of pyridine and nicotine. 3. 673.
Zorcastrova, V. M., see Arbuzov, A. E.

Absorption spectra, of copper, "biuret" organometallic protein complexes, 855.
– of copper "biuret" complexes of protein breakdown products, 963.
– electron, of polystyrene and its derivatives, 903.
– ultra-violet, of some derivatives of pyridine and nicotine, 673.
Acetals, amino, synthesis, 185.
– alkyl phenyl, preparation, properties, hydrolysis, 959.
– dialkyl, synthesis, 617.
– of ethylene glycol, syntheses of, 617.
– β-hydroxyethylalkyl, preparation, 617.
– mono- and di-, of tetramethylbutindiol, synthesis of, 955.
1-Acetyl-1-cyclohexene, reaction of carbocyclic ketones with, 423.
Acetylene, hydrogenation of, on metallic nickel, elucidation of the role of various adsorptional centers, 577.
Acetylene derivatives. Communication 126. Synthesis of polycyclic compounds related to steroids. Synthesis of tetracyclic ketones having a methylcyclopentane B ring, 427.
– Communication 127. Synthesis of polycyclic compounds related to the steroids. Structure of the products of condensation of 2-methoxybuta-1,3-diene with 1-methylcyclohex-1-en-6-one and methyl methacrylate, 643.
– Com. 128. Heterocyclic compounds. Action of primary aromatic amines and α-aminopyridine on vinyl allyl ketones. Synthesis of aryl-substituted γ-piperidones and 1-(α-pyridyl)-4-piperidones, 923.
– Com. 129. Heterocyclic compounds. Transformations of 1-phenyl-2,5-dimethyl-4-piperidone, 933.
Acetylenic alcohols, preparation of, 691.
Acetylenic alcohols and glycols, researches on, 955.
Acetylenic glycols, researches on, 955.
Acid, adipic, kinetics, of acidolysis of ethyl stearate with, 193.
Acid, β-aminobutyric, synthesis and reactions of, 113.
Acid, β-amino-β-cyclohexylpropionic, and some of its derivatives, synthesis of, 293.
Acid, ethylphosphonous, esters of, and some of their reactions, 765.
– partial esters of, 843.
Acid, methacrylic, addition of dialkylphosphorous acids to the amide and esters of, 657.
Acid, β-(β-naphthyl)-β-aminopropionic, and certain of its derivatives, synthesis and characterization of, 123.
Acid, 2-(2'-naphthyl)-2-aminopropionic, and its pyrimidine derivatives. 285.
Acid, phosphoramidous, N-substituted cyclic esters of, 713.
– phosphorochloridodithious, ethylene ester of, and related substances, 437.
– phosphorochloridous, cyclic esters of, preparation, 705; preparation of cyclic esters of, 697.
– phosphorous, derivatives of, containing a cyclohexyl radical, 723.
– succinic, kinetics of acidolysis of ethyl stearate with, 193.
– chlorides, of dialkylphosphorous acids, addition to α-epoxides, 837.
– chlorides, cyclic, and mixed esters derived from (alkoxymethyl)ethylene hydrogen arsenites and trimethylene hydrogen arsenite, preparation of, 807.
Acidolysis, of ethyl stearate with adipic acid, kinetics of, 193; with succinic acid, kinetics of, 193.
– significance of, in the polyesterification reaction, 193.
Acids, alkylphosphonic, esters of, and their parachors, 787.
– β-amino, investigations relating to, 113; new synthesis of alkyl esters of, 637; series, the Curtius reaction in, 847. (See also Amino acids).
– arylsulfonamidophosphoric, preparation, 649.
– 7-benz[a]anthracenemethane-phosphonic, and 12-methyl-7-benz[a]anthracenemethane-phosphonic, synthesis of, 131.
– 1-(3-bromopropyl)-2-oxo-cyclopentane-carboxylic, and 1-(3-chloropropyl)-2-oxo-cyclopentanecarboxylic, preparation of ethyl esters, 419.
– citraconic and mesaconic and their esters, condensation with divinyl, 301.
– dialkoxyphosphinylsuccinic, and their esters, preparation of, 821.
– dialkylphosphorous, viscosity and structure of, 485; addition to the amide and esters of methacrylic acid, 657; addition of, to unsaturated dibasic acids and their esters, 821; and their acid chlorides, addition to α-epoxides, 837.
– dicarboxylic, significance of decarboxylation of, in polycondensation process, 509.
– diphenylstibinic, preparation of, 103.
– glycolphosphorous, esters of, 697.
– hydroxyalkylphosphonic, preparation of, 837.
– inorganic, hexadecyl esters of, 483.
– 1-methylcyclohexane-1,2-dicarboxylic, and their esters, cis-trans isomerism of, 301.
– unsaturated carboxylic, synthesis and properties of α-alkoxyethyl esters of, ("acylals"), 453.
– unsaturated dibasic, and their esters, addition of dialkylphosphorous acids to, 821.
Acrylate, methyl, polymerization of, in the absence of light, 265.

Acrylic esters, addition of phenyl- and alkyl-phosphonous esters to, 803.
Acylals, hydrolysis of, 453.
"Acylals" (α-alkoxyethyl esters of unsaturated carboxylic acids), synthesis and properties of, 453.
Adipic acid, (See Acid, adipic).
Adsorbents, porous structure of, 549.
Adsorption, of ethylene and propylene on active charcoal, 877.
– of gaseous mixtures. Part 2. Adsorption of ethylene and propylene on active charcoal, 877.
– of mixtures, on heterogeneous surfaces, dynamics of, 69.
Adsorptional centers in the reaction of hydrogenation of acetylene on metallic nickel, elucidation of role of, 577.
Alcohols, acetylenic, researches on, 955; preparation of, 691.
– aliphatic, indirect vinylation of, 959.
– higher fatty, synthesis of vinyl ethers of, 465.
– kinetics of dehydration of, in presence of tricalcium phosphate, 177.
– reaction of sulfides of phosphorous with, 661.
– role of, in the synthesis of hydrocarbons from carbon monoxide and hydrogen, 601.
– and titanium, tetrachloride, preparation of trichloroalkoxytitanes from, 907.
Aldehydes, addition of O,O-diethyl hydrogen phosphorothioite to, 825
Aliphatic alcohols, indirect vinylation of, 959.
Alkanes, catalytic alkylation of ammonia with halogen derivatives of, 599.
– isomerization of, in presence of $AlCl_3$ under a pressure of hydrogen, 171.
– halogen derivatives of, catalytic alkylation of ammonia with, 473.
α-Alkoxyethyl esters of unsaturated carboxylic acids ("acylals"), synthesis and properties of, 453.
(Alkoxymethyl) ethylene hydrogen arsenites, preparation of mixed esters derived from, 807.
Alkyl esters, of β-amino-acids, new synthesis of, 637.
Alkyl halides, action of, on sodium, potassium, and silver dialkyl phosphorothioates, 755.
– effect of the nature of the halogen and of its position in the molecule on amination of, 599.
– magnesium, mechanism of reaction of β-silicoalkyl halides with, 591.
– β-silico, mechanism of reaction with magnesium alkyl halides, 591.
Alkylisoxazoles, synthesis of, from β-chlorovinyl ketones, 97.
Alkyl-lithium and β-silicohalides, synthesis of silicohydrocarbons from, 985.
Alkyl phenyl acetals, preparation, properties, hydrolysis of, 959.
Alkylation, catalytic, of ammonia with halogen derivatives of alkanes, and cycloalkanes, 473; of alkanes and cyclanes, 599.
Alkylphosphonic acids, esters of, and their parachors, 787.
Alkylphosphonoselenonic esters, mechanism of addition to alkylphosphonous esters, 797.
Alkyl-phosphonous esters, addition to methacrylic and acrylic esters, 803.
Alkylphosphonothionic esters, mechanism of addition to alkylphosphonous esters, 797.
Alloys, heat of formation of, 255.
– thermodynamic study of, 255.
– of aluminum and magnesium, and of bismuth and antimony, intracrystalline liquation, by the microhardness method, 251.
– of the magnesium-cadmium system, mechanical properties of, 383.
– magnesium-silicon, electron density of, 31.
Allylsilanes, synthesis and properties of, 537.
Allyltributylsilane, synthesis and properties of, 537.
Aluminum chloride, isomerization of alkanes in presence of, under a pressure of hydrogen, 171.
– reactions of methylcyclohexane and toluene in contact with, 149.
Aluminum-magnesium alloys, intracrystalline liquation of, by the micro-hardness method, 251.
Aluminum oxide catalysts, of dehydration reactions, effect of dimensions of elementary crystallites on the porosity and activity of, 325.
Amide of methacrylic acid, addition of dialkylphosphorous acid to, 657.
Amides of sulfuric acid and trichlorophosphazosulonaryls, new data on the chemistry of, 649.
Amination of alkyl halides, effect of the nature of the halogen and of its position in the molecule on, 599.
Amines, primary aromatic, action of, on vinyl allyl ketones, 923.
Aminoacetals, synthesis of, 185.
β-Amino acid series, the Curtius reaction in, 847.
– investigations relating to, 113.
– new class of coordination compounds of chromium with, 269.
– new synthesis of alkyl esters of, 637.
β-Aminobutyric acid, synthesis and reactions of, 113.
β-Amino-β-cyclohexylpropionic acid, synthesis of, and some of its derivatives, 293.
β-Aminopropionic acid, β-(β-naphthyl), and certain of its derivatives, synthesis and characterization of, 123.
2-Aminopropionic acid, 2-(2'-naphthyl)-, and its pyrimidine derivatives, 285.
Amino phosphonic esters, new method for the synthesis of, 831.
α-Aminopyridine, action of, on vinyl allyl ketones, 923.

2-Aminopyridines, ultra-violet absorption spectra of, 673.
Ammonia, catalytic alkylation of, with halogen derivatives of alkanes, and cycloalkanes, 473; of alkanes and cyclanes, 599.
Analogs, of phenol compounds of the inert gases, 23.
Anilides, preparation of, 649.
Anthracene derivatives, investigation of, 135.
– 9, 10-dichloro-, relative activities of the meso carbon atom in reactions with oxidizing agents, 135.
Antimony-bismuth alloys, intracrystalline liquation of, by the micro-hardness method, 251.
– compounds, aromatic organo-, synthesis of, by the aid of arylazoformates, 103.
Aqueous solutions, coordination numbers and hydration of the ions, Li^+, Na^+, K^+, Cl^-, Br^-, and I^-, in, 389.
– coordination numbers of ions, Mg^{2+}, Ca^{2+}, Sr^{2+}, and Ba^{2+} in, 585.
Aromatic arsenic-organic compounds, synthesis of, through arylazocarboxylic salts, 911
– nitroso compounds, addition of 2,3-dimethyl-1,3-butadiene, 1-phenyl-1,3-butadiene, and of bi-1-cyclohexen-1-yl to, 539.
– organo-antimony compounds, synthesis of, by the aid of arylazoformates, 103.
Arsenic-organic compounds, aromatic, through arylazocarboxylic salts, 911.
Arsenites, (alkoxymethyl)ethylene-, and trimethylene-, hydrogen, preparation of mixed esters derived from, 807.
Arsenochloridites, preparation, properties of, 807.
Arylazocarboxylic salts, arsenic-organic compounds through, 911.
Arylazoformates, use in synthesis of aromatic organo-antimony compounds, 103.
4-Aryldihydrouracils, preparation of, 637.
1-Aryl-3-hydroxypyrrolidines, synthesis of, 695.
N-Aryl quaternary salts of quinoline derivatives, 347.
N-Arylquinaldine derivatives, asymmetrical carbocyanines from 499.
N-Arylquinaldine, asymmetrical carbocyanines from, 667.
N-Arylquinocyanines, preparation, 491.
N-Arylquinolinium salts, preparation and properties, 347.
Aryl-substituted γ-piperidones, synthesis of, 923.
Arylsulfonamidophosphoric acids, preparation, 649.
Ash tuffs, and their weathering products, electron microscopic investigations of, 395.
Atoms, thermochemistry and structure of, 245.
Azoformates, aryl, use of, in synthesis of aromatic organo-antimony compounds, 103.

Barium ions, coordination numbers of, in aqueous solutions, 585.
Beketov, N. N., session of the Division of Chemical Sciences devoted to the 125th anniversary of the birth of, 543.
Bentonite clays, electron-microscopic investigation of, 395.
β-Benzamidobutyric acid, preparation of, 118.
7-Benz[a]anthracenemethane-phosphonic, and 12-methyl-7-benz[a]anthracenemethane phosphonic acids, synthesis of, 131.
Benzene, nitroso, addition of 1,3-butadiene to, 523.
– addition of cyclohexa-1,3-diene to, 613.
Benzene vapor, sorption by natural sorbents, 553.
Benzothiazole, derivatives, unsymmetrical carbocyanines from, 499.
N-Benzoylated imidazolidone derivatives, preparation of, 847.
Biisocrotyl, catalytic hydrogenation of, 409.
Binary metallic systems, heat of formation of, 255.
– thermodynamic study of, 255.
Binary systems, adsorption on active charcoal, 877.
– metallic, thermodynamic study of, 255.
Bismuth-antimony alloys, intracrystalline liquation, by the micro-hardness method, 251.
Bismuth-cadmium system, thermodynamic study of, 255.
"Biuret" metallo-organic complexes, of protein breakdown products, 963.
"Biuret" organometallic protein complexes, 855.
Bonds, contact, and the new structural theory, 215.
– double, conjugated system of, catalytic hydrogenation of doubly unsaturated compounds with, 409.
Boric esters, viscosity-structure relationships for, 773.
Boron, thermochemistry of, 245.
Buta-1,3-diene, addition of nitrosobenzene to, 339.
– addition to nitrosobenzene, 523.
– addition of, to p-nitrosotoluene, 607.
– reaction with 1-chloro-1-nitrosocyclohexane, 355.
– 2,3-dimethyl, addition to aromatic nitroso compounds, 539.
– 1-phenyl, addition to aromatic nitroso compounds, 539.
Butane, cyclo-, series, synthesis of hydrocarbons, 319.
n-Butene, effect of the carbon monoxide concentration on the hydrocondensation reactions with carbon monoxide, 157.
N-2-Butenylaniline, preparation, 523.
Butindiol, tetramethyl, synthesis of mono- and di-acetals of, 955.
A. M. Butlerov's theory of chemical structure, ninety years of, 1.
– teaching, the development of organic chemistry in the light of, 13.
Butylsilane, triallyl, synthesis and properties of, 537.
Butyric acid, β-amino, synthesis and reactions of, 113.

Cadmium-lead system, thermodynamic study of, 255.
– magnesium system, mechanical properties of alloys of, 383.
– tin system, thermodynamic study of, 255.
– zinc system, thermodynamic study of, 255.

Calcium ions, coordination numbers of, in aqueous solutions, 585.
Capillary condensation, calculation of, in the vicinity of points of contact of spherical particles, 885.
– of vapors in highly disperse systems, studies of, 885.
Caprolactam, vinyl, polymerization of, in presence of hydrogen peroxide, 633.
– vinyl, synthesis, hydrolysis, polymerization of, 627.
– vinyl, synthesis and transformations of, 633.
Carbon monoxide, catalytic hydrocondensation of, with olefins, 157; 859; 939.
– concentration, effect of, on the hydrocondensation reactions with propene and n-butene, 157.
– and hydrogen, role of oxygen-containing compounds in the synthesis of hydrocarbons from, 601.
Carbonic ester groupings, presence in oxycellulose, and their effect on the estimation of uronic carboxyl groups, 199.
Carbostyril derivatives, tautomerism of, 747.
Carboxyl groups, uronic, estimation of, and effect of carbonic ester groupings in oxycellulose, 199.
Carcinogenic compounds, derivatives of, preparation, 131.
Catalysis, dehydrogenation, poisoning of catalysts with a low content of active metal, on a carrier under conditions of, 567.
Catalytic alkylation of ammonia with halogen derivatives of alkanes, and cycloalkanes, 473.
– of ammonia with halogen derivatives of alkanes and cyclanes. Part 2. Effect of the nature of the halogen and of its position in the molecule on amination of alkyl halides, 599.
Catalysts, Al_2O_3, of dehydration reactions, effect of dimensions of elementary crystallites on the porosity and activity of, 325.
– for desulfurization of gasoline, 469.
– determination of specific surface of, 327.
– poisoning of, with a low content of active metal on a carrier under conditions of dehydrogenation catalysis, 567.
– vanadium, study of oxygen exchange on, by the use of O^{18}, 403.
Catalytic dehydrogenation, of ethylbenzene, role of inert diluents on, 559.
– of ethylcyclohexane fraction of Maikop gasoline, preparation of styrene by, 477.
Carbocyanines, asymmetrical, from N-arylquinaldine and indolenine, 667.
– asymmetrical, from derivatives of N-arylquinaldine and of benzothiazole, 499.
Carbocyclic ketones, reaction of, with 1-acetyl-1-cyclohexene, 423.
Catalytic hydrocondensation of carbon monoxide with olefins. Communication 7. Effect of the carbon monoxide concentration on the hydrocondensation reactions of carbon monoxide with propene and n-butene, 157.
– of carbon monoxide with olefins. Communication 8. Hydrocondensation of carbon monoxide with 2-methylpropene, 859.
– of carbon monoxide with olefins. Com.9. Reaction of methanol and ethanol with ethylene, 939.
Catalytic hydrogenation of biisocrotyl, 409.
– of doubly unsaturated compounds having a conjugated system of double bonds. Communication 1. Hydrogenation of biisocrotyl, 409.
Catalytic oxidation of ethylene on magnesium chromite, 55.
– of phosphine over a wide range of temperatures, 895.
Cathodic polarization of iron in oxidizing media, 377.
Cell, sorption, behavior, and meniscus of liquid obtained by capillary condensation of vapor in, 885.
Cellobiose, a-octyl-acetyl, optical activity of, 333.
Cellulose, chemical transformations of, due to its oxidation with sodium hypochlorite, 681.
Cellulose macromolecule, chemical changes produced by oxidizing agents, 199.
– chemical transformations of, caused by oxidants, 681.
Cellulose triacetate, optical activity of, 333.
Charcoal, active, adsorption of ethylene and propylene on, 877.
– adsorption of phosphine on, 895.
– porous structure of, 549.
Chemical changes produced in the cellulose macromolecule by oxidizing agents. Communication 6. The presence in oxycelluloses of carbonic ester groupings and their effect on the estimation of uronic carboxyl groups, 199.
Chemical structure, theory of, ninety years of A. M. Butlerov's, 1.
– and pharmacological activity, conference on relation between, 223.
Chemical transformations of cellulose macromolecules caused by oxidants. Com.7. Chemical transformations of cellulose due to its oxidation with sodium hypochlorite, 681.
Chemistry of amides of sulfuric acid and trichlorophosphazosulfonaryls, new data on, 649.
Chemistry and physical chemistry, of high-molecular compounds, conference on, 997.
Chemistry, organic, development of, in the light of A. M. Butlerov's teaching, 13.
Chemistry of pyrazolone derivatives, new data on, 917.
Chemistry, Soviet, toward new successes of, 873.
Chlorides, cyclic acid, and mixed esters derived from (alkoxymethyl)ethylene hydrogen arsenites and trimethylene hydrogen arsenite, preparation of, 807.
– trialkoxytitanium, new method of synthesizing, 81.
– triethoxytitanium, transesterification of, 81.
1-Chloro-1-nitrosocyclohexane, reaction with buta-1,3-diene and cyclohexa-1,3-diene, 355.
Chloroprene, polymerization of, 41.

β-Chlorovinyl ketones, synthesis of isoxazoles from, 97.
Chromatography, on heterogeneous surfaces, theory of, 63.
– theory of, on heterogeneous surfaces, 69.
Chromium, new class of coordination compounds with amino-acids, 269.
Cis-trans isomerism of 1-methylcyclohexane-1,2-dicarboxylic acids and their esters, 301.
Citraconic acid and esters, condensation with divinyl, 301.
Clays, bentonite, electron-microscopic investigation of, 395.
Complex compounds of phosphorous esters. Communication 1. Compounds with copper, silver and gold salts, 729.
– Communication 2. Complex compounds with platinous salts, 737.
– Communication 3. Complex compounds with mercury salts, 743
Compounds containing conjugated links, polymerization of, 41.
– with conjugated double bonds, kinetics of polymerization of, 265.
Condensation, capillary, calculation of, in the vicinity of points of contact of spherical particles, 885.
– of vapors in highly disperse systems, studies of, 885.
Condensation, of cyclic β-diketones with vinyl ketones and transformations of the resulting products, 309.
– of divinyl with citraconic and mesaconic acid and their esters, 301.
– poly, process, significance of decarboxylation of dicarboxylic acids in, 509.
– products of 2-methoxybuta-1,3-diene with methylcyclohex-1-en-6-one and methyl methacrylate, 643.
Conjugated double bonds, kinetics of polymerization of compounds with, 265.
– links, polymerization of compounds containing, 41.
– system of double bonds, catalytic hydrogenation of doubly unsaturated compounds with, 409.
"Contact bonds" and the "new structural theory", 215.
Coordination compounds, new class of, of chromium with amino-acids, 269.
– stability of and the periodic law of D. I. Mendeleev, 239.
Coordination numbers and hydration of the ions Li^+, Na^+, K^+, Cl^-, Br^-, and I^- in aqueous solutions, 389.
– of the ions Mg^{2+}, Ca^{2+}, Sr^{2+}, and Ba^{2+} in aqueous solutions, 585.
Copper "biuret" complexes of protein breakdown products, absorption spectra of, 963.
Copper compounds, in catalytic oxidation of phosphine, 895.
Copper salts, compounds of phosphorous esters with, 729.
Crystal-hydrates of uranyl nitrate and chloride, free energy and heat of dehydration of, 981.
Crystals, experimental study of electron density, 31.
Crystallites, elementary, dimensions of, effect on the porosity and activity of Al_2O_3 catalysts of dehydration reactions, 325.
Current, alternating, effect on the electrodeposition of nickel, 399.
The Curtius reaction in the β-amino acid series, 847.
Cyanine dyes, preparation, 491.
– studies in the field of, 667.
– Communication 1. Symmetrical N-arylquinocyanines, 491.
– Communication 2. Unsymmetrical carbocyanines from derivatives of N-arylquinaldine and of benzothiazole, 499.
Cyanines, N-arylquino-, preparation, 491.
Cyclanes, catalytic alkylation of ammonia with halogen derivatives of, 599.
Cycloalkanes, catalytic alkylation of ammonia with halogen derivatives of, 473.
Cyclic acid chlorides and mixed esters derived from (alkoxymethyl)ethylene hydrogen arsenites and trimethylene hydrogen arsenite, preparation of, 807.
Cyclic compounds, researches on the stereochemistry of, 301.
Cyclic β-diketones, condensation of with vinyl ketones, and transformations of the resulting products, 309.
Cyclic esters, of phosphorochloridous acid, preparation of, 697.
– of phosphorochloridous acid, preparation of, 705.
– mixed, of phosphorous acid, preparation of, 697.
– N-substituted, of phosphoramidous acid, 713.
– of triethylene glycol with succinic, adipic and sebacic acids, preparation of, viscosity, 773.
Cyclic ketones, unsaturated, reaction of phosphorous trichloride with, 517.
Cyclic, poly-, compounds related to the steroids, synthesis of 643.
Cyclobutane, 1-methyl-3-ethyl-, synthesis of, 319.
Cyclobutane series, synthesis of hydrocarbons of, 319.
Cyclohexa-1,3-diene, addition of, to nitrosobenzene, 613.
– reaction with 1-chloro-1-nitroso-cyclo-hexane, 355.
– 1-ethinyl, and its derivatives, 691.
1-Cyclohexene, 1-acetyl, reaction of carbocyclic ketones with, 423.
Cyclohexane, 1-chloro-1-nitroso, reaction with buta-1,3-diene and cyclohexa-1,3-diene, 355.
bi-1-Cyclohexen-1-yl, addition to aromatic nitroso compounds, 539.
β-Cyclohexylpropionic acid, β-amino-, synthesis of, and some of its derivatives, 293.
Cyclohexyl radical, phosphorous acid derivatives containing, 723.
Cyclopentane carboxylic acids, 1-(3-bromo-propyl)-

2-oxo-, and 1-(3-chloropropyl)-2-oxo-, preparation of ethyl esters, 419.
Cyclopentane, methyl, B ring, synthesis of ketones with, 427.

Decarboxylation, of dicarboxylic acids in the polycondensation process, significance of, 509.
Dechlorination of hexachlorethane by trialkyl phosphites, 819.
Decolorizing earths, sorption of benzene vapor by, 553.
Dehyration and thermal properties of perhydrates of sodium carbonate, 589.
– of alcohols in presence of tricalcium phosphate, kinetics of, 177.
– reactions, effect of dimensions of elementary crystallites on the porosity and activity of Al_2O_3 catalysts of, 325.
Dehydrogenation catalysis, poisoning of catalysts with a low content of active metal, on a carrier, under conditions of, 567.
– catalytic, of the ethylcyclohexane fraction of Maikop gasoline, preparation of styrene by, 477.
– catalytic, role of inert diluents on, 559.
Density, π-electron, and interatomic distances, distribution of, 359.
– electron, in crystals, experimental study of, 31.
– electron, of Mg_2Si, 31.
Desorption curves, determination of heats of adsorption of sites on a solid surface from, 63.
Desulfurizing action of Troshkov kaolin, 469.
Dialkenyls, γ-halogeno-, behavior of, in the Grignard-Würtz synthesis, 949.
Dialkoxy derivatives, α,β- and β,β'- of diethyl sulfides, synthesis of, 459.
β,β-Dialkoxydiethylmercaptals, preparation, properties, 459.
Dialkoxyphosphinylformamides, N,N-diethyl-, dipole moments of, 781.
Dialkoxyphosphinylsuccinic acids and their esters, preparation, 821.
Dialkylacetals, synthesis of, 617.
Dialkylphosphinic esters, mechanism of addition to alkylphosphonous esters, 797.
(Dialkylphosphinyl)formamides, N,N-diethyl-, preparation of, 759.
Dialkylphosphorochloridates, preparation of, 819.
Dialkyl phosphorothioates, sodium, potassium, and silver, action of alkyl halides on, 755.
Dialkylphosphorous acids, addition to the amide and esters of methacrylic acid, 657.
Dialkylphosphorous acids, addition of, to unsaturated dibasic acids and their esters, 821.
– viscosity and structure of, 485.
– and their acid chlorides, addition to α-epoxides, 837.
Dialkyldithiophosphates, preparation of, 661.
Diatomite, electron-microscopic investigation of, 395.
Dibasic acids, unsaturated, and their esters, addition of dialkylphosphorous acids to, 821.
Dibenzhydrylthiophen, structure and certain properties of, 993.
Dibutyl vinylphosphonate, preparation of, 813.
Dicarboxylic acids, aromatic, preparation, structure, properties, of polyesters of, 505.
– significance of decarboxylation of, in polycondensation process, 509.
9,10-Dichloroanthracene, relative activities of the meso-carbon atom in reactions with oxidizing agents, 135.
Diene, buta-1,3-, addition of nitrosobenzene to, 339.
– addition of, to p-nitrosotoluene, 607.
– reaction with 1-chloro-1-nitrosocyclohexane, 355.
1,3-Diene, cyclohexa-, addition of, to nitrosobenzene, 613.
– reaction with 1-chloro-1-nitroso-cyclo-hexane, 355.
– 1-ethinylcyclohexa-, and its derivatives, 691.
– 2-methoxy-, structure of the products of condensation of, with methylcyclohex-1-en-6-one and methyl methacrylate, 643.
– 2-methoxybuta-, structure of the products of condensation of, with methylcyclohex-1-en-6-one and methyl methacrylate, 643.
Diene hydrocarbons, reactions of, with nitroso-compounds, 339.
– reactions with nitrosocompounds, 355.
– reactions of, with nitroso compounds, 523.
– reactions of, with nitroso-compounds, 607.
– reactions of, with nitroso-compounds, 613.
– reactions of, with nitroso-compounds, 539.
Diene synthesis reactions with vinylphosphonic esters, 813.
N,N-Diethyl(dialkoxyphosphinyl)formamides, dipole moments of, 781.
– preparation of, 759.
O,O-Diethyl-hydrogen phosphorothioite, addition of, to ketones and aldehydes, 825.
Diethyl sulfides, some new α,β- and β,β'-dialkoxy derivatives of, 459.
Differential isotope method, study of the active surface of nickel, by means of, 577.
3,6-Dihydro-2-phenyl-1,2,2H-oxazine, reduction, 523.
– 1,2,2H-oxazine derivatives, preparation, 539.
Diisobutylene, preparation of, 165.
β-Diketones, cyclic, condensation of, with vinyl ketones, and transformations of the resulting products, 309.
Diluents, inert, role of, on catalytic dehydrogenation of ethylbenzene, 559.
Di-(3-methylcyclobutyl) methane, synthesis of, 319.
2,3-Dimethyl-1,3-butadiene, addition to aromatic nitroso compounds, 539.
Dimethylene-neopentylcarbinol, monohalide derivatives of, splitting-off of hydrogen halide from, 165.

β,β-Diphenylpropionylmesitylene, enolization, benzoylation, methoxymethylation, 92.
Diphenylstibinic acids, preparation, 103.
Dipole moments of N,N-diethyl(dialkoxyphosphinyl) formamides, 781.
Disperse systems, studies of capillary condensation of vapors in, 885.
Dithious acid, phosphorochlorido, ethylene ester of, and related substances, 437.
Divinyl, condensation of, with citraconic and mesaconic acid and their esters, 301.
Double bonds, conjugated, kinetics of polymerization of compounds with, 265.
– conjugated system of, catalytic hydrogenation of doubly unsaturated compounds with, 409.
Dyes, cyanine, preparation, 491; studies in the field of, 667.
Dyestuffs chemistry. Cyanine dyes. Communication 1. Symmetrical N-arylquinocyanines, 491.
– Cyanine dyes. Communication 2. Unsymmetrical carbocyanines from derivatives of N-arylquinaldine and benzothiazole, 499.
– Studies in the field of cyanine dyes. Part 3. Asymmetrical carbocyanines from N-arylquinaldine and indolenine, 667.
Dynamics, of the adsorption of mixtures on heterogeneous surfaces, 69.

Earths, decolorizing, sorption of benzene vapor by, 553.
– diatomaceous, industrial bleaching, Fuller's, sorption of benzene vapor by, 553.
Electrochemical behavior of iron in oxidizing media. Communication 3. Cathode polarization of iron in oxidizing media, 377.
Electrodeposition, of nickel, effect of alternating current on, 399.
Electron absorption spectra of polystyrene and its derivatives, 903.
π-Electron density and interatomic distances, distribution of, 359.
Electron density, in crystals, experimental study, 31.
– of Mg_2Si, 31.
Electron-microscopic investigation of ash-tuffs and their weathering products, bentonite clays and diatomites, 395.
– investigations of natural sorbents, 395.
Elements of the third group of D. I. Mendeleev's system, application of the rule of thermochemical logarithmics, 245.
Enolates, sodium, stereoisomeric, 87.
Enolization, of β,β-diphenylpropionylmesitylene, 92.
α-Epoxides, addition of dialkylphosphorous acids and their acid chlorides to, 837.
Ester, ethylene, of phosphorochloridodithious acid and related substances, 437.
Esters, acrylic and methacrylic, addition of phenyl- and alkyl-phosphonous esters to, 803.
Esters, α-alkoxyethyl, of unsaturated carboxylic acids ("acylals"), synthesis and properties of, 453.
– alkyl, of β-amino-acids, new synthesis of, 637.
– of alkylphosphonic acids, and their parachors, 787.
– certain alkylphosphonothionic, alkylphosphonoselenonic, dialkylphosphinic and alkylphosphonous, and the mechanism of addition to alkylphosphonous esters, 797.
– alkylphosphonous, mechanism of addition to certain alkylphosphonothionic, alkylphosphonoselenonic, dialkylphosphinic, esters, 797.
– amino phosphonic, new method for the synthesis of, 831.
– of citraconic and mesaconic acid, condensation with divinyl, 301.
– cyclic, of phosphorochloridous acid, preparation, 697.
– cyclic, of phosphorochloridous acid, preparation, 705.
– cyclic, of triethylene glycol with succinic, adipic, and sebacic acids, preparation of, viscosity, 773.
– of dialkoxyphosphinylsuccinic acids, preparation of, 821
– ethyl, of 7-benz[a]anthracenemethanephosphonic, and 12-methyl-7-benz[a]anthracenemethanephosphonic acids, synthesis of, 131.
– ethyl, of 1-(3-bromopropyl)-2-oxocyclopentanecarboxylic acid, and of 1-(3-chloropropyl)-2-oxo-cyclopentanecarboxylic acid, preparation of, 419.
Esters of ethylphosphonous acid, and some of their reactions. Communication 1. Full esters of ethylphosphonous acid, 765.
– ethylphosphonous, and some of their reactions, 843.
– of "glycolphosphorous acids". Communication 1. Compounds having five-, seven- and eight-membered rings, 697.
– of "glycolphosphorous acids". Communication 2. Compounds having a six-membered ring, 705.
– hexadecyl, of certain inorganic acids, 483.
– α-hydroxy phosphonothionic, preparation of, 825.
– ketophosphonothionic, preparation of, 825.
– of methacrylic acid, addition of dialkylphosphorous acid to, 657.
– of 1-methylcyclohexane-1,2-dicarboxylic acids, cis-trans isomerism of, 301.
– mixed, derived from (alkoxymethyl)-ethylene hydrogen arsenites and trimethylene hydrogen arsenite, preparation of, 807.
– mixed, of phosphorous acid, preparation of, 723.
– mixed, cyclic, of phosphorous acid, preparation of, 697.
– partial, of ethylphosphonous acid, 843.
– phosphinic, new method for the synthesis of, 657; and their thio analogs, new method for the synthesis of, 825; and their thio analogs, new method for the synthesis of, 831.

– phosponic and phosphinic and their thio analogs, new method for the synthesis of, 821.
– phosphonic, and their thio analogs, new method for the synthesis of, 825.
– phosphonic, and their thio analogs, new method for the synthesis of, 831.
– phosphonic and phosphinic, and their thio analogs, synthesis of, 803.
– phosphorous, compounds with copper, silver, and gold, 729.
– phosphorous, complex compounds of, 737.
– phosphorous, complex compounds of, 743
– phosphorous, phosphoric, phosphorothionic, and boric, viscosity-structure relationships, 773.
– poly, of certain aromatic dicarboxylic acids, preparation, structure, properties, 505.
– poly, macromolecules, reactions with each other, 967.
– N-substituted cyclic, of phosphoramidous acid, 713
– thiophosphinic, new method for the synthesis of, 657.
– of unsaturated dibasic acids, addition of dialkylphosphorous acids to, 821
– vinylphosphonic, phosphonoethylation and diene-synthesis reactions with, 813.
Esterification, poly, reaction, significance of acidolysis in, 193.
Ethane, hexachloro-; dechlorination of, by trialkyl phosphites, 819.
Ethanol, reaction with ethylene, 939.
Ethanolamines, vinyl ethers of, synthesis and reactions of, 185.
Ethers, of isatin, preparation of, hydrolysis, 443.
– vinyl, of ethanolamines, synthesis and reactions of, 185.
– vinyl, of higher fatty alcohols, synthesis of, 465.
– vinyl, synthesis of sulfur compounds by the aid of, 459.
1-Ethinylcyclohexa-1,3-diene and its derivatives, 691.
Ethylation, phosphono-, and diene synthesis reactions with vinylphosphonic esters, 813.
Ethylbenzene, catalytic dehydrogenation of, role of inert diluents on, 559.
Ethylcyclohexane fraction of Maikop gasoline, preparation of styrene by catalytic dehydrogenation of, 477.
Ethyl esters, of 7-benz[a]anthracenemethanephosphonic and 12-methyl-7-benz[a]anthracenemethanephosphonic acids, synthesis of, 131.
– of 1-(3-bromopropyl)-2-oxocyclopentanecarboxylic acid, and of 1-(3-chloropropyl)-2-oxo-cyclopentanecarboxylic acid, preparation of, 419.
Ethyl stearate, kinetics of acidolysis with adipic and succinic acids, 193.
Ethylene, adsorption on active charcoal, 877.
– catalytic oxidation of, on magnesium chromite, 55.
– reaction of methanol and ethanol with, 939.
– ester of phosphorochloridodithious acid, and related substances, 437.
– glycol, polyesters with aromatic dicarboxylic acids, preparation, structure, properties of, 505.
– glycol, syntheses of acetals of, 617.
Ethylphosphonous acid, esters of, and some of their reactions, 765.
– esters and some of their reactions. Communication 2. Partial esters of ethylphosphonous acid, 843.
– acid, partial esters of, 843.

Fatty alcohols, higher, synthesis of vinyl ethers of, 465.
Formamides, N,N-diethyl (dialkoxyphosphinyl), preparation of, 759.
Formamides, N,N-diethyl(dialkoxyphosphinyl), dipole moments of, 781.
Formates, arylazo-, use of, in synthesis of aromatic organo-antimony compounds, 103.
Free energy and heat of dehydration of crystal-hydrates of uranyl nitrate and chloride, 981.

Gaseous mixtures, adsorption of, 877.
Gasoline, desulfurization by Troshkov kaolin, 469.
– Maikop, preparation of styrene by catalytic dehydrogenation of the ethylcyclohexane fraction of, 477.
Gel, silica, porous structure of, 549.
Glucose, α-pentyl-acetyl, optical activity of, 333.
Glycols, acetylenic, researches on, 955.
Glycol, ethylene, syntheses of acetals of, 617.
– ethylene, polyesters with aromatic dicarboxylic acids, preparation, structure, properties of, 505.
– triethylene, cyclic esters of, with succinic, adipic, and sebacic acids, preparation and viscosity, 773.
"Glycol-phosphorous acids," esters of, 697; 705.
Gold salts, compounds of phosphorous esters with, 729.
Grignard-Würtz synthesis, behavior of γ-halogeno di-alkenyls in, 949.

Halides, alkyl, action of, on sodium, potassium, and silver dialkyl phosphorothioates, 755.
– effect of the nature of the halogen and of its position in the molecule on amination of, 599.
– magnesium alkyl, mechanism of reaction with β-silicoalkylhalides, 591.
– mercuric, reaction with phosphorous ester, 743.
– β-silicoalkyl, mechanism of reaction with magnesium alkyl halides, 591.
Halogen, effect of the nature of, and of its position in the molecule on amination of alkyl halides, 599.
– derivatives of alkanes, and cycloalkanes, catalytic alkylation of ammonia with, 473.
– derivatives of alkanes and cyclanes, catalytic alkylation of ammonia with, 599.
γ-Halogeno di-alkenyls, behavior of, in the Grignard-Würtz synthesis, 949.
Halo, mono-derivatives of dimethylneopentylcarbinol, [2-Cl(I)-2,4,4-trimethylpentane], splitting-off of the elements of hydrogen halide from, 165.
– mono-derivatives of hydrocarbons of the series C_nH_{2n+2}, splitting off of the elements of hydrogen halide, 165.

Hardness, micro-, method of studying intracrystalline liquation, 251.
Heat of dehydration and free energy of crystalhydrates of uranyl nitrate and chloride, 981.
Heat of formation of alloys, 255.
Heat of formation of binary metallic systems, 255.
Heats of adsorption of sites on a solid surface, determination from desorption curves, 63.
Heats of formation, of phenol compounds of inert gases, 28.
Heats of solution, of LiCl, NaCl, KCl, $NaBr \cdot 2H_2O$, $NaI \cdot 2H_2O$ and $N(CH_3)_4Br$ in aqueous solutions of HCl, measurement of, 390.
Heavy oxygen, use of, in study of oxygen exchange on vanadium catalysts, 403.
Heterocyclic compounds. XXIII. Action of primary aromatic amines and α-aminopyridine on vinyl allyl ketones Synthesis of aryl-substituted γ-piperidones and 1-(α-pyridyl)-4-piperidones, 923.
– XXIV. Transformations of 1-phenyl-2,5-dimethyl-4-piperidone, 933.
Heterogeneous surfaces, dynamics of adsorption of mixtures on, 69.
– theory of chromatography on, 63; 69.
Hexachlorethane, dechlorination of, by trialkyl phosphites, 819.
Hexadecyl esters of certain inorganic acids, 483.
n-Hexane, isomerization of, 171.
High-molecular compounds, conference on the chemistry and physical chemistry of, 997.
– Part 52. Reactions of polyester macromolecules with each other, 967.
Hydration, and coordination numbers of the ions, Li^+, Na^+, K^+, Cl^-, Br^-, and I^- in aqueous solutions, 389.
Hydrocarbons of the cyclobutane series, synthesis of, 319.
Hydrocarbons, diene, reactions of, with nitroso-compounds, 339; 355; 523; 539; 607; 613.
– role of oxygen-containing compounds in the synthesis of, from carbon monoxide and hydrogen, 601.
– of the series C_nH_{2n+2}, mono-halo derivatives of, splitting-off of the elements of hydrogen halide, 165.
– silico-, synthesis of, from β-silicohalides and alkyllithium, 985.
Hydrocondensation of carbon monoxide with 2-methylpropene, 859.
– catalytic, of carbon monoxide with olefins, 157, 859; 939.
Hydrogen arsenites, (alkoxymethyl)ethylene-, and trimethylene-, preparation of mixed esters derived from, 807.
Hydrogen halide, splitting-off of the elements of, from monohalo derivatives of dimethylneopentylcarbinol, [2-Cl(I)-2,4,4-trimethylpentane], 165; splitting-off of the elements of, from monohalo derivatives of hydrocarbons of the series C_nH_{2n+2}, 165.
Hydrogen, isomerization of alkanes under a pressure of, in presence of $AlCl_3$, 171.
Hydrogen peroxide, polymerization of vinylcaprolactam in presence of, 633.
– study of systems containing, 589.
Hydrogenation of acetylene on metallic nickel, elucidation of the role of various adsorptional centers, 577.
– catalytic, of biisocrotyl, 409.
– catalytic, of doubly unsaturated compounds having a conjugated system of double bonds, 409.
Hydrolysis, of acylals, 453.
Hydroxyalkylphosphonic acids, preparation of, 837.
β-Hydroxyethylalkylacetals, preparation of, 617.
α-Hydroxy phosphonothionic esters, preparation, 825.

Imidazolidone, N-benzoylated derivatives, preparation of, 847.
Indolenine, asymmetrical carbocyanines from, 667.
Inert diluents, role of, on catalytic dehydrogenation of ethylbenzene, 559.
Inert gases, phenol compounds of, and their analogs, 23.
Inorganic acids, hexadecyl esters of, 483.
Interatomic distances and π-electron density, distribution of, 359.
Intra-crystalline liquation, micro-hardness method of studying, 251; nature of the phenomenon of, 251; of alloys of aluminum and magnesium and of bismuth and antimony, by the micro-hardness method, 251.
Ions, Li^+, Na^+, K^+, Cl^-, Br^-, and I^-, coordination numbers and hydration in aqueous solutions, 389.
– Mg^{2+}, Ca^{2+}, Sr^{2+}, and Ba^{2+}, coordination numbers of, in aqueous solution, 585.
Iron, cathodic polarization of, in oxidizing media, 377.
– electrochemical behavior of, in oxidizing media, 377.
Isatin ethers, preparation of, hydrolysis, 443.
– tautomerism of, 443.
Isomerism, cis-trans, of 1-methylcyclohexane-1,2-dicarboxylic acids and their esters, 301.
– of alkanes in presence of $AlCl_3$ under a pressure of hydrogen. Communication 1. Isomerization of n-hexane, 171.
– of n-hexane, 171.
Isomorphism, of phenol compounds of inert gases, 27.
Isotope, differential method, study of the active surface of nickel by means of, 577.
Isoxazoles, synthesis of, from β-chlorovinyl ketones, 97.

Kaolin, electron-microscopic investigation of, 395.

Kaolin, Troshkov, desulfurizing action of, 469.
Ketones, addition of O,O-diethyl hydrogen phosphorothioite to, 825.
– carbocyclic, reaction of, with 1-acetyl-1-cyclohexene, 423.
– β-chlorovinyl, synthesis of isoxazoles from, 97.
– tetracylic, having a methylcyclopentane B ring, synthesis of, 427.
– unsaturated cyclic, reaction of phosphorus trichloride with, 517.
– vinyl, condensation of with cyclic β-diketones, and transformations of the resulting products, 309.
– vinyl allyl, action of primary aromatic amines and α-aminopyridine on, 923.
Ketophosphonothionic esters, preparation of, 825.
Kinetics of the dehydration of alcohols in presence of tricalcium phosphate, 177.
– of the polymerization of compounds containing a conjugated link. Polymerization of methyl acrylate, 41.
– of polymerization of compounds with conjugated double bonds. Polymerization of methyl acrylate in absence of light, 265.

Lactam, vinylcapro, synthesis hydrolysis, and polymerization of, 627; synthesis and transformations of 633; polymerization of, in presence of hydrogen peroxide, 633.
Lead-tin system, thermodynamic study of, 255.
Light, absence of, polymerization of methyl acrylate in, 265.
Liquation, intra-crystalline, micro-hardness method of studying, 251; nature of the phenomenon of, 251.
Logarithmics, thermochemical, application of the rule of, to elements of the third group of D. I. Mendeleev's system, 245.
Lomonosov, M. V., 240th anniversary of the birth of, 367.
– session in honor of the bicentenary of the foundation of the science of physical chemistry by, 869.

Macromolecular compounds. Communication 43. Significance of acidolysis in the polyesterification reaction, 193.
– Communication 44. Polyesters of certain aromatic dicarboxylic acids, 505.
– Communication 45. Significance of the decarboxylation of dicarboxylic acids in the polycondensation process, 509.
Macromolecule, cellulose, chemical changes produced by oxidizing agents, 199.
– cellulose, chemical transformations of, caused by oxidants, 681.
– polyester, reactions with each other, 967.
Magnesium alkyl halides, mechanism of reaction of β-silicoalkyl halides with, 591.
Magnesium-aluminum alloys, intracrystalline liquation of, by the micro-hardness method, 251.
Magnesium-cadmium system, mechanical properties of alloys of, 383.
Magnesium chromite, catalytic oxidation of ethylene on, 55.
– sodium silicate, catalytic oxidation of ethylene on, 55.
Magnesium ions, coordination numbers of, in aqueous solutions, 585.
Magnesium-silicon alloy, electron density of, 31.
Mechanism of reaction of magnesium alkyl halides with β-silicoalkyl halides, 591.
Mendeleev, D. I., prizes for 1951, award of, 373.
Mendeleev's system, application of the rule of thermochemical logarithmics to elements of the third group, 245.
Mercaptals, β,β'-dialkoxydiethyl, preparation, properties, 459.
Mercuric halides, reaction with phosphorous esters, 743.
Mercury salts, complex compounds of phosphorous esters with, 743.
Mesaconic acid and esters, condensation with divinyl, 301.
Mesitylene, β,β-diphenylpropionyl, enolization, benzoylation, methoxymethylation, 92.
Meso carbon atom of anthracene and 9,10-dichloroanthracene, relative activities of, in reactions with oxidizing agents, 135.
Mesomerism, or theory of resonance, remarks on, 973.
Metallic systems, binary, heat of formation of, 255.
Metallo-organic "Biuret" complexes of protein breakdown products, 963.
Methacrylic acid, addition of dialkylphosphorous acids to the amide and esters of, 657.
Methacrylic esters, addition of phenyl- and alkylphosphonous esters to, 803.
Methane, di-(3-methylcyclobutyl), synthesis of, 319.
– tetrabutyl, synthesis and properties of, 945.
– tetrapropyl, synthesis and properties of, 945.
Methanol, reaction with ethylene, 939.
2-Methoxybuta-1,3-diene, structure of the products of condensation of, with methylcyclohex-1-en-6-one and methyl methacrylate, 643.
Methyl acrylate, polymerization of, 41; in the absence of light, 265.
Methylallylsilanes, synthesis and properties of, 989.
Methylcyclohexane, reactions in contact with aluminum chloride, 149.
1-Methylcyclohexane-1,2-dicarboxylic acids and their esters, cis-trans isomerism of, 301.
Methyl-cyclohex-1-en-6-one, structure of products of condensation with 2-methoxybuta-1,3-diene, 643.

Methylcyclopentane B ring, synthesis of ketones with, 427.
1-Methyl-3-ethylcyclobutane, synthesis of, 319.
Methylimidazolidone, preparation of, 120.
Methyl methacrylate, structure of products of condensation with 2-methoxybuta-1,3-diene, 643.
2-Methylpropene, hydrocondensation of carbon monoxide with, 859.
1-Methyltrimethylene phosphorochloridite, preparation of, 705.
Micro-hardness method of studying intracrystalline liquation. 1. Nature of the phenomenon of intracrystalline liquation, 251.
Microscope, electron, investigations of natural sorbents, 395.
Mixtures, gaseous, adsorption of, 877.
Molecular weights, of compounds of phosphorous esters with copper, silver, and gold salts, determination of, 729.
Moments, dipole, of N,N-diethyl(dialkoxyphosphinyl) formamides, 781.
Monohalo derivatives of dimethylneopentylcarbinol, [2-Cl(I)]2,4,4-trimethylpentane], splitting-off of the elements of hydrogen halide from, 165.
– of hydrocarbons of the series C_nH_{2n+2}, splitting-off of the elements of hydrogen halide, 165.
Montmorillonite clays, electron-microscopic investigation of, 395.

β-Naphthaldehyde, preparation of, 123.
β-(β-Naphthyl)-β-aminopropionic acid and certain of its derivatives, synthesis and characterization of, 123.
2-(2'-Naphthyl)-2-aminopropionic acid and its pyrimidine derivatives, Part 2, 285.
α-Naphthylsilane, triallyl, synthesis and properties of, 537.
Natural sorbents, electron-microscopic investigation of, 395.
Natural sorbents of the Far East. Electron-microscopic investigations of natural sorbents, 395; sorption of benzene vapor by natural sorbents, and the structure of sorbents, 553.
Neopentyl carbinol, dimethyl, monohalide derivatives of, splitting-off of hydrogen halide from, 165.
Nickel, effect of alternating current on electrodeposition of, 399.
– study of active surface of, by means of a differential isotope method, 577.
Nicotine, ultra-violet absorption spectra of some derivatives of, 673.
Nitrosobenzene, addition of buta-1,3-diene to, 339, 523.
Nitrosobenzene, addition of cyclohexa-1,3-diene to, 613.
Nitroso compounds, aromatic, addition of 2,3-dimethyl-1,3-butadiene, 1-phenyl-1,3-butadiene, and of bi-1-cyclohexen-1-yl to, 539.
– reactions, with diene hydrocarbons, 339, 355, 523, 539, 607, 613.
1-Nitrosocyclohexane, 1-chloro, reaction with buta-1,3-diene and cyclohexa-1,3-diene, 355.
p-Nitrosotoluene, addition of buta-1,3-diene to, 607.

α-Octyl-acetyl cellobiose, optical activity of, 333.
Olefins, catalytic hydrocondensation of carbon monoxide with, 157, 859, 939.
– perfluoro-, addition reactions of, 279.
Optical activity of cellulose triacetate, α-pentyl-acetyl glucose and α-octyl-acetyl cellobiose, 333.
Organic chemistry, development of, in the light of A. M. Butlerov's teaching, 13.
Organo-antimony compounds, aromatic, synthesis of, by the aid of arylazoformates, 103.
Organometallic "Biuret" protein complexes. 855.
Organo-phosphorous compounds, researches in the field of, 661.
1,2,2H-Oxazine, 3,6-dihydro-2-phenyl, reduction, 523.
Oxazine, ortho-, 3,6-dihydro-derivatives, preparation of, 355.
– 2-phenyl-3,6-dihydro-, preparation from nitrosobenzene and buta-1,3-diene, 339.
– 2-phenyl-3,6-dihydro-, synthesis from cyclohexa-1,3-diene and nitrosobenzene, 616.
Orthoxazine, 2-p-tolyl-3,6-dihydro-, synthesis from buta-1,3-diene and p-nitrotoluene, 607.
1,2,2H-Oxazine, 3,6-dihydro, derivatives, preparation, 539.
Oxaxoles, iso, synthesis of, from β-chlorovinyl ketones, 97.
Oxidants, chemical transformations of cellulose macromolecules, caused by, 681.
Oxidation with sodium hypochlorite, chemical transformations of cellulose due to, 681.
Oxidation, catalytic, of ethylene on magnesium chromite, 55
Oxidation, catalytic, of phosphine over a wide range of temperatures, 895.
Oxidizing agents, chemical changes produced in the cellulose macromolecule by, 199.
– relative activities of the meso carbon atom of anthracene and 9,10-dichloroanthracene, in reactions with, 135.
Oxidizing media, cathodic polarization of iron in, 377.
– electrochemical behavior of iron in, 377.
Oxycelluloses, formation from cellulose by sodium hypochlorite oxidation, 681.
– presence of carbonic ester groupings in, and their effect on the estimation of uronic carboxyl groups, 199.
Oxygen-containing compounds, role of, in the synthesis of hydrocarbons from carbon monoxide and hydrogen, 601.
Oxygen exchange, on vanadium catalysts, study of, by the use of O^{18}, 403.
Oxygen, heavy, use of, in study of oxygen exchange on vanadium catalysts, 403.

Parachors, of esters of alkylphosphonic acids, 787.
Partial esters of ethylphosphonous acid, 843.
Particles, spherical, calculation of capillary condensation in the vicinity of points of contact of, 885.
Pentane,2-Cl(I)-2,4,4-trimethyl, splitting-off of the elements of hydrogen halide from, 165.
α-Pentyl-acetyl glucose, optical activity of, 333.
Perfluoro-olefins, addition reactions of, 279.
Perhydrates of sodium carbonate, thermal properties and dehydration of, 589.
Periodic law of D. I. Mendeleev and the stability of co-ordination compounds, 239.
Pharmaceutical chemistry. Investigations relating to β-amino acids, synthesis and reactions of β-aminobutyric acid, 113.
Pharmacological activity, and chemical structure, conference on relation between, 223.
Phenol compounds, of the inert gases and their analogs, 23.
4-Phenylamino-2-buten-1-ol, preparation 523.
1-Phenyl-1,3-butadiene, addition to aromatic nitroso compounds, 539.
2-Phenyl-3,6-dihydro-ortho-oxazine, preparation from nitrosobenzene and buta-1,3-diene, 339.
1-Phenyl-2,5-dimethyl-4-piperidone, transformations of, 933.
2-Phenyl-3,6-endoethyleno-3,6-dihydro-orthoxazine, synthesis from cyclohexa-1,3-diene and nitrosobenzene, 616.
Phenyl-phosphonous esters, addition to methacrylic and acrylic esters, 803.
1-Phenylpyrrole, reduction of, 531.
1-Phenyl-3-pyrroline, preparation, reduction, 523.
Phosphates, dialkyldithio, preparation of, 661.
Phosphazosulfonaryls, trichloro, new data on the chemistry of, preparation, hydrolysis, acidolysis, aminolysis, arylaminolysis, 649.
Phosphine, catalytic oxidation of, over a wide range of temperatures, 895.
Phosphinic esters, dialkyl, mechanism of addition to alkylphosphonous esters, 797.
– new method for the synthesis of, 657.
– and their thio analogs, synthesis of, 803.
– and their thio analogs, new method for the synthesis of, 821, 825, 831.
Phosphinylformamides, N,N-diethyl-dialkyl, preparation of, 759.
– N,N-diethyl, dialkoxy, dipole moments of, 781.
Phosphinylsuccinic acids, dialkoxy-, and their esters, preparation of, 821.
Phosphites, trialkyl, dechlorination of hexachloroethane by, 819.
Phosphonic acids, esters of, and their parachors, 787.
– hydroxyalkyl, preparation of, 837.
– synthesis of 7-benz[a] anthracenemethane- and 12-methyl-7-benz[a]anthracene-, 131.
Phosphonic esters and their thio analogs, synthesis of, 803.
– and their thio analogs, new method for the synthesis of, 821, 825, 831.
– amino, new method for the synthesis of, 831.
"Phosphonoethylation" and diene-synthesis reactions with vinylphosphonic esters, 813.
Phosphonous acid, ethyl, esters of, and some of their reactions, 765.
Phosphonous alkyl esters, mechanism of addition to alkylphosphonous esters, 797.
Phosphonous esters, phenyl- and alkyl-, addition to methacrylic and acrylic esters, 803.
Phosphonoselenonic, alkyl, esters, mechanism of addition of alkylphosphonous esters, 797.
Phosphonothionic, alkyl, esters, mechanism of addition to alkylphosphonous esters, 797.
Phosphoramidous acid, N-substituted cyclic esters of 713.
Phosphoric esters, viscosity-structure relationships for, 773.
Phosphorochloridates, dialkyl, preparation of, 819.
Phosphorochloridodithious acid, ethylene ester of, and related substances, 437.
Phosphorochloridous acid, cyclic esters of, preparation, 697, 705.
Phosphorothioates, dialkyl, sodium, potassium and silver, action of alkyl halides on, 755.
Phosphorothioite, O,O-diethyl hydrogen, addition of, to ketones and aldehydes, 825.
Phosphorothionic esters, viscosity-structure relationships for, 773.
Phosphorous acids, dialkyl, addition of, to the amide and esters of methacrylic acid, 657.
– dialkyl, and their acid chlorides, addition to α-epoxides, 837.
– viscosity and structure of, 485.
– esters of, 705.
– mixed cyclic esters of, preparation, 697.
– mixed esters of, preparation, 723.
– derivatives containing a cyclohexyl radical, 723.
– glycol-, esters of, 697.
Phosphorous esters, complex compounds of, 729, 737, 743.
– compounds with copper, silver, and gold, 729.
– viscosity-structure relationships for, 773.
Phosphorus-organic compounds, researches in the field of, 661.
Phosphorus, sulfides of, reaction with alcohols, 661.
Phosphorus, trichloride, reaction with unsaturated cyclic ketones, 517.
Photographic science, conference on the basic problems of, 225
Physical chemistry, session in honor of the bicentenary of the foundation of the science of, by M. V. Lomonosov, 869.

γ-Piperidones, aryl-substituted, synthesis of, 923.
4-Piperidone, 1-phenyl-2,5-dimethyl, transformations of, 933.
4-Piperidones, 1-(α-pyridyl), synthesis of, 923.
Platinous chloride, complex compounds of phosphorous esters with, 737.
Platinous salts, complex compounds of phosphorous esters with, 737.
Platinum dehydrogenation catalysts on a carrier, poisoning by organic sulfur compounds, 567.
Polarization, cathodic, of iron in oxidizing media, 377.
Polycondensation process, significance of decarboxylation of dicarboxylic acids in, 509.
Polycyclic compounds related to the steroids, synthesis of, 301, 423, 427, 643.
Polyesters of certain aromatic dicarboxylic acids, preparation, structure, properties, 505.
Polyester macromolecules, reactions with each other, 967.
Polyesterification reaction, significance of acidolysis, 193.
Polymers, three-dimensional, properties of, 507.
Polymerization, hydrolysis, and synthesis of vinylcaprolactam, 627.
– kinetics of, of compounds with conjugated double bonds, 265.
– of chloroprene, 41.
– of compounds containing a conjugated link, 41.
– of methyl acrylate, 41.
– of methyl acrylate in the absence of light, 265.
– of vinylcaprolactam in presence of hydrogen peroxide, 633.
Polypeptides, preparation of, 649.
Polystyrene and its derivatives, electron absorption spectra of, 903.
Porous structure of active charcoal, silica gel, 549.
– of adsorbents, 549.
Porosity and activity of Al_2O_3 catalysts of dehydration reactions, effect of dimensions of elementary crystallites, 325.
Potassium iodide, compounds of, with phosphorous esters-platinous salts, complexes, 737.
Propene, effect of the carbon monoxide concentration on the hydrocondensation reactions with carbon monoxide, 157.
– 2-methyl, hydrocondensation of carbon monoxide, with, 859.
Propionic acid, β-amino-β-cyclohexyl-, and some of its derivatives, synthesis of, 293.
– β-(β-naphthyl)-β-amino-, and certain of its derivatives, synthesis and characterization of, 123
Propylene, adsorption on active charcoal, 877.
Principle, trans-effect, conference on, 863.
Prizes, D. I. Mendeleev, award of, for 1951, 373.
Protein breakdown products, metallo-organic "Biuret" complexes, of, 963.
Protein complexes, organometallic "Biuret", 855.
Proto-acids, protein, properties of, 855.
Pyrazolone derivatives, new data on the chemistry of, 917.
Pyridine, ultra-violet absorption spectra of some derivatives of, 673.
– α-amino, action of, on vinyl allyl ketones, 923.
– 2-amino-, ultra-violet absorption spectra of, 673.
1-(α-Pyridyl)-4-piperidones, synthesis of, 923.
Pyrimidine derivatives, of 2-(2'-naphthyl)-2-aminopropionic acid, 285.
Pyrrole, 1-phenyl, reduction of, 531.
Pyrrolidines, 1-aryl-3-hydroxy, synthesis of, 695.
3-Pyrroline, 1-phenyl, preparation, 523.

Quaternary salts, N-aryl, of quinoline derivatives, 347.
Quinaldine, N-aryl, asymmetrical carbocyanines from, 667.
– N-aryl, derivatives, unsymmetrical carbocyanines, from 499.
Quinocyanines, N-aryl, preparation, 491.
Quinoline derivatives, N-aryl quaternary salts of, 347.
– studies of, 347.
Quinolinium salts, N-aryl, preparation and properties, 347.

Resonance, theory of, letter to the editor relating to, 547.
– or mesomerism, remarks on, 973.

Salts, arylazocarboxylic, arsenic-organic compounds through, 911.
– N-aryl quaternary, of quinoline derivatives, 347.
– N-aryl quinolinium, preparation and properties, 347.
– of copper, silver, and gold, compounds of phosphorous esters with, 729.
– of mercury, complex compounds of phosphorous esters with, 743.
– platinous, complex compounds of phosphorous esters with, 737.
Silane, allyltributyl, synthesis and properties of, 537.
– dimethyl-di-(methylallyl), synthesis and properties of, 989.
– methyldi-(methylallyl), synthesis and properties of, 989.
– methyltri-(methylallyl), synthesis and properties of, 989.
– tetrahexyl, synthesis and properties of, 945.
– triallylbutyl, synthesis and properties, of, 537.
– triallyl-α-naphthyl, synthesis and properties of, 537.
– trimethylcyclopentadienyl, synthesis and properties of, 989.
– trimethylbut-3-enyl, synthesis and properties of, 989.
Silanes, allyl, synthesis and properties of, 537.
– methylallyl, synthesis and properties of, 989.
Silica gel, porous structure of, 549.
β-Silicoalkyl halides, mechanism of reaction with magnesium alkyl halides, 591.

β-Silicohalides and alkyl-lithium, synthesis of silicohydrocarbons from, 985.
Silicohydrocarbons, synthesis of, from β-silicohalides and alkyl-lithium, 985.
– unsaturated, synthesis and properties of, 989.
Silicon-magnesium alloy, electron density of, 31.
Silver salts, compounds of phosphorous esters with, 729.
Sodium carbonate, perhydrates of, thermal properties and dehydration of, 589.
Sodium enolates, stereoisomeric, 87.
– hypochlorite, chemical transformations of cellulose due to oxidation with, 681.
– silicate-magnesium chromite catalyst, catalytic oxidation of ethylene on, 55.
Solid surfaces, heats of adsorption, determination from desorption curves, 63.
Solubility, in the reciprocal system $CaSO_4$–KCl–H_2O at 55°, 45.
– in ternary systems, 45.
Solution, heats of, of LiCl, NaCl, KCl, NaBr·$2H_2O$, NaI·$2H_2O$ and $N(CH_3)_4Br$ in aqueous solutions of HCl, measurement of, 390.
Solutions, aqueous, coordination numbers and hydration of the ions, Li^+, Na^+, K^+, Cl^-, Br^-, and I^- in, 389.
– aqueous, coordination numbers of ions Mg^{2+}, Ca^{2+}, Sr^{2+}, and Ba^{2+} in, 585.
Sorbents, natural, electron-microscopic investigation of, 395.
– of the Far East, 395.
– sorption of benzene vapor by, 553.
– structure of, 553.
Sorption of benzene vapor by natural sorbents, and the structure of sorbents, 553.
– cell, meniscus of liquid obtained by capillary condensation of vapor in, 888.
Soviet chemistry, toward new successes of, 873.
Specific surface, of catalysts, determination of, 327.
– of elementary crystallites, effect of, on the porosity and activity of Al_2O_3 catalysts of dehydration reactions, 325.
Spectra, electron absorption of polystyrene and its derivatives, 903.
Sphericle particles, calculation of capillary condensation in the vicinity of points of contact of, 885.
Stability, of coordination compounds, periodic law of D. I. Mendeleev and, 239.
Stereochemistry, of cyclic compounds, researches on, 301.
Stereoisomeric sodium enolates, 87.
Steroid compounds and related substances, synthesis of, 309.
Steroids, synthesis of polycyclic compounds related to, 301, 423, 427, 643, 309.
Stibinic acids, diphenyl, preparation of, 103.
Strontium ions, coordination numbers of, in aqueous solutions, 585.
Structural theory, new, answer to the critics of, 205.
– contact bonds and, 215.
Structure, chemical and pharmacological activity, conference on relation between, 223.
– chemical, theory of, ninety years of A. M. Butlerov's 1.
– and viscosityof dialkyl phosphorous acids, 485.
– and certain properties of dibenzhydrylthiophen, 993.
– and thermochemistry of atoms, 245.
– porous, of active charcoal, silica gel, 549.
– porous, of adsorbents, 549.
– of the products of condensation of 2-methoxybuta-1,3-diene with methylcyclohex-1-en-6-one and methyl methacrylate, 643.
– of sorbents, 553.
– viscosity relationship for phosphorous, phosphoric, phosphorothionic and boric esters, 773.
Styrene, from catalytic dehydrogenation of ethylbenzene, role of inert diluents, 559.
– poly, and its derivatives, electron absorption spectra of, 903.
– preparation of, by catalytic dehydrogenation of the ethylcyclohexane fraction of Maikop gasoline, 477.
Styril, carbo-, derivatives, tautomerism of, 747.
N-Substituted cyclic esters of phosphoramidous acid, 713.
Succinic acid, kinetics of acidolysis of ethyl stearate with, 193
Succinic acids, dialkoxyphosphinyl-, and their esters, preparation of, 821.
Sulfides, diethyl, some new α,β- and β,β'-dialkoxy derivatives of, 459.
– of phosphorus, reaction of, with alcohols, 661.
Sulfonaryls, trichlorophosphazo, new data on the chemistry of, preparation, acidolysis, aminolysis, arylaminolysis, hydrolysis, 649.
Sulfur compounds, synthesis of, by the aid of vinyl ethers, 459.
– organic, poisoning of platinum catalysts on carrier by, 567.
Sulfur, removal from gasoline by Troshkov kaolin, 469.
Surfuric acid, new data on the chemistry of amides of, and trichlorophosphazosulfonaryls, 649.
Surface, active, of nickel, study of by means of a differential isotope method, 577.
Surfaces, heterogeneous, dynamics of adsorption of mixtures on, 69.
– heterogeneous, theory of chromatography, 69.
– solid, heats of adsorption, determination from desorption curves, 63.
Symmetrical N-arylquinocyanines, preparation, 491.
Syntheses of acetals of ethylene glycol, 617.
Synthesis and characterization of β-(β-naphthyl)-β-aminopropionic acid and certain of its

derivatives. Communication 1, 123.
– and polymerization of vinylcaprolactam, 627.
– and properties of α-alkoxyethyl esters of unsaturated carboxylic acids ("acylals"), 453.
– and properties of allylsilanes: triallyl-α-naphthylsilane, triallylbutylsilane, and allyltributylsilane, 537.
– and properties of tetrapropylmethane, tetrabutylmethane, and tetrahexylsilane, 945.
– and properties of unsaturated silicohydrocarbons: dimethyl-di-(methylallyl) silane, methyldi-(methylallyl)silane, methyltri-(methylallyl)silane, tetra-(methylallyl)silane, trimethylcyclopentadienylsilane, and trimethylbut-3-enylsilane, 989.
– and reactions, of β-aminobutyric acid, 113.
– and reactions of vinyl ethers of ethanolamines. Communication 2. The synthesis of aminoacetals, 185.
– and transformations of vinylcaprolactam. Part 1. Polymerization in presence of hydrogen peroxide, 633.
– new, of alkyl esters of β-amino-acids, 637.
– of β-amino-β-cyclohexylpropionic acid and of some of its derivatives, 293.
– of aminophosphonic esters, new method for, 831.
– of aromatic arsenic-organic compounds through arylazocarboxylic salts, 911.
– of aromatic organo-antimony compounds by the aid of arylazoformates, 103.
– of aryl-substituted γ-piperidones and 1-(α-pyridyl)-4-piperidones, 923.
– of 7-benz[a]anthracenemethanephosphonic and 12-methyl-7-benz[a]anthracenemethane phosphonic acids, 131.
– Grignard-Würtz, behavior of γ-halogeno di-alkenyls in, 949.
– of hydrocarbons, from carbon monoxide and hydrogen, role of oxygen-containing compounds in, 601.
Synthesis of hydrocarbons of the cyclobutane series. Part 2. 1-Methyl-3-ethylcyclobutane and di-(3-methylcyclobutyl) methane, 319.
– of isoxazoles from β-chlorovinyl ketones, 97.
– of 1-methyl-3-ethylcyclobutane and di-(3-methylcyclobutyl) methane, 319.
– of mono- and di-acetals of tetramethylbutindiol, 955.
– of phosphinic and thiophosphinic acid esters, new method for, 657.
– of phosphonic and phosphinic esters and their thio analogs, new methods for, 825.
– of phosphonic and phosphinic esters and their thio analogs, new methods for, 831.
– of polycyclic compounds related to the steroids, 301, 309, 423, 427, 643.
– of silicohydrocarbons from β-silicohalides and alkyllithium, 985.
– of sulfur compounds by the aid of vinyl ethers. Communication 5. Some new α,β- and β,β'-dialoxyderivatives of diethyl sulfides, 459.
– of tetracyclic ketones having a methyl-cyclopentane B ring, 427.
– of trialkoxytitanium chlorides, new method of, 81.
– of the vinyl ethers of higher fatty alcohols, 465.
Systems, binary, adsorption on active charcoal, 877.
– binary, metallic, thermodynamic study of, 255.
– cadmium-zinc, cadmium-lead, cadmium-tin, bismuth-cadmium, tin-zinc and lead-tin, 255.
– $CaSO_4$–KCl–H_2O at 55°, solubility in, 45.
– containing hydrogen peroxide, study of, 589.
– disperse, studies of capillary condensation of vapors in, 885.
– ethylene-propylene, adsorption on active charcoals, 877.
– magnesium-cadmium mechanical properties of alloys of, 383.
– ternary, solubility in, 45.

Tautomerism, of isatin, 443.
– of carbostyril derivatives, 747.
Ternary systems, solubility in, 45.
Tetrabutylmethane, synthesis and properties of, 945.
Tetracyclic ketones, having a methyl-cyclopentane B ring, synthesis of, 427.
Tetrafluoroethylene, addition reactions of, 279.
Tetramethylbutindiol, synthesis of mono- and di-acetals of, 955.
Tetrapropylmethane, synthesis and properties of, 945.
Tetrahexylsilane, synthesis and properties of, 945.
Thermal properties and dehydration of perhydrates of sodium carbonate, 589.
Thermochemical logarithmics, application of the rule of, to elements of the third group of D. I. Mendeleev's system, 245.
Thermochemistry and structure of atoms. Part 6. Thermochemistry of boron: application of the rule of thermochemical logarithmics to elements of the third group of D. I. Mendeleev's system, 245.
– of boron, 245.
Thermodynamic study of the systems cadmium-zinc, cadmium-lead, cadmium-tin, bismuth-cadmium, tin-zinc and lead-tin, 255.
Thio analogs, of phosphonic and phosphinic esters, synthesis of, 803, 821, 825, 831.
Thiophen, dibenzhydryl, structure and certain properties of, 993.
Thiophosphinic acid esters, new method for the synthesis of, 657.
Thiophosphates, dialkyldi-, preparation of, 661.
Thiourea, compounds of, with phosphorous esters-platinous salts complexes, 737.
Tin-zinc system, thermodynamic study of, 255.
Titanium chlorides, trialkoxy, new method of synthesizing, 81.

Titanium chlorides, triethoxy, transesterification of, 81.
– tetrachloride, and alcohols, preparation of trichloroalkoxytitanes from, 907.
Titanes, trichloroalkoxy, preparation of, from titanium tetrachloride and alcohols, 907.
Toluene, p-nitroso-, addition of buta-1,3-diene to, 607.
– reactions in contact with aluminum chloride, 149.
2-p-Tolyl-3,6-dihydro-orthoxazine, synthesis from buta-1,3-diene and p-nitrosotoluene, 607.
Trans-effect principle, conference on, 863.
Transesterification, of triethoxytitanium chlorides, 81.
Triacetate, cellulose, optical activity of, 333.
Trialkoxytitanium chlorides, new method of synthesizing, 81.
Triallylbutylsilane, synthesis and properties of, 537.
Triallyl-α-naphthylsilane, synthesis and properties of, 537.
Transformations and synthesis of vinylcaprolactam, 633.
– of 1-phenyl-2,5-dimethyl-4-piperidone, 933.
Trialkyl phosphites, dechlorination of hexachloroethane by, 819.
Tributylsilane, allyl, synthesis and properitiesof, 537.
Tricalcium phosphate, kinetics of dehydration of alcohols in presence of, 177.
Trichloroalkoxytitanes, preparation of, from titanium tetrachloride and alcohols, 907.
Trichlorophosphazosulfonaryls, new data on the chemistry of, hydrolysis, acidolysis, aminolysis, arylaminolysis, preparation of, 649.
Triethoxytitanium chlorides, transesterification of, 81.
Triethylene glycol, cyclic esters of, with succinic, adipic, sebacic acids, preparation of, viscosity, 773.
Trimethylene hydrogen arsenite, preparation of mixed esters derived from, 807.
– phosphorochloridite, preparation of, 705.
Troshkov kaolin, desulfurizing action of, 469.

Ultra-violet absorption spectra of some derivatives of pyridine and nicotine. Part 3, 673.
Uracils, 4-aryldihydro, preparation of, 637.
Uranyl chloride, free energy and heat of dehydration of crystal-hydrates of, 981.
– nitrate, free energy and heat of dehydration of crystal-hydrates of, 981.
Uronic carboxyl groups, estimation of, and effect of carbonic ester groupings, in oxycellulose, 199.

Vanadium catalysts, study of oxygen exchange on by use of O^{18}, 403.
Vapor, benzene, sorption by natural sorbents, 553.
Vapors, studies of capillary condensation of, in highly disperse systems, 885.
Vinyl allyl ketones, action of primary aromatic amines and α-aminopyridine on, 923.
Vinylation, indirect, of aliphatic alcohols, 959.
Vinylcaprolactam, polymerization of in presence of hydrogen peroxide, 633.
– synthesis and polymerization of, 627.
– synthesis and transformations of, 633.
Vinyl ethers, synthesis of sulfur compounds by the aid of, 459.
– of ethanolamines, synthesis and reactions of, 185.
– of higher fatty alcohols, synthesis of, 465.
Vinyl ketones, condensation of, with cyclic β-diketones, and transformations of the resulting products, 309.
Vinylphosphonate, dibutyl, preparation of, 813.
Vinylphosphonic esters, phosphonoethylation and diene-synthesis reactions with, 813.
Viscosity and structure of dialkylphosphorous acids, 485.
Viscosity-structure relationship for phosphorous, phosphoric, phosphorothionic, and boric esters, 773.

Group C_1

1. II

CH_4O. Methanol, reation with ethylene, 939.

Group C_2

2. I

C_2H_4. Ethylene, adsorption on active charcoal, 877; reaction with methanol and ethanol, 939.

2. II

C_2H_6O. Ethanol, reaction with ethylene, 939.

2. IV

$C_2H_4O_2PCl$. Product of reaction of ethylene glycol, dimethylaniline, PCl_3, 699.

$C_2H_4S_2PCl$. Chlorido ester obtained by action of phosphorous trichloride on ethanedithiol, 438.

$C_2H_5OTiCl_3$. Trichloroethoxytitane, preparation, 908.

$C_2H_5O_2Cl_2As$. (Chloromethyl)ethylene arsenochloridite, preparation, properties, 809.

$C_2H_5PSCl_2$. 1) Ethylphosphonothionic dichloride, preparation, properties, 769.
2) Product obtained by addition of sulphur to ethylphosphonous dichloride, 800.

$C_2H_7O_2PS$. Product of reaction of P_4S_6 and methanol, 663; product of reaction of P_4S_7 and methanol, 663; product of reaction of P_4S_7 with ethanol, 663.

2. V

$C_2H_5OPS_2Ba$. Barium salt of dithiane, preparation, 439.

Group C_3

3. I

C_3H_6. 1) Propene, hydrocondensation of carbon monoxide with, 157.
2) Propylene, adsorption on active charcoal, 877.

3. II

C_3H_8O. n-Propanol, role in the synthesis of hydrocarbons from carbon monoxide and hydrogen, 601.

3. III

$C_3H_5O_3Ag$. Silver lactate, preparation, 952.

$C_3H_7O_3P$. Ethylene methyl phosphite, preparation, properties, action of alkyl halides, 699.

$C_3H_9O_2P$. Methyl hydrogen ethylphosphonite, preparation, properties, 843.

3. IV

$C_3H_6O_2AsCl$. Trimethylene arsenochloridite, preparation, properties, 809.

$C_3H_6O_2PCl$. Trimethylene phosphorochloridite, preparation, properties, action of alkyl iodides, 707.

$C_3H_7OTiCl_3$. Trichloro-n-propoxytitane, preparation, 908.

$C_3H_7O_2TiCl_3$. Trichloro-β-methoxyethoxytitane, preparation, 909.

$C_3H_9O_2PS_2$. Product of reaction of P_4S_6 and methanol, 663; product of reaction of P_4S_7 with methanol, 663.

3. V

$C_3H_9O_3PAuCl$. Complex compound of trimethyl phosphite and AuCl, preparation, 734.

$C_3H_9O_3PCl_2Pt$. Product of reaction of methanol with $PtCl_2 \cdot PCl_3$, 739.

$C_3H_9O_3PHgBr_2$. Product of reaction of mercuric bromide with trimethyl phosphite, 744.

$C_3H_9O_3PHg_2Cl_4$. Product of reaction of mercuric chloride with trimethyl phosphite, 743.

Group C_4

4. I

C_4H_8. n-Butene, hydrocondensation of carbon monoxide with, 157.

4. II

$C_4H_6O_2$. Crotonic acid, preparation, 118.

$C_4H_{10}O$. n-Butanol, role in the synthesis of hydrocarbons from carbon monoxide and hydrogen, 601.

4. III

C_4H_5ON. Methylisoxazole, preparation, properties, sodium ethoxide treatment, 99.

C_4H_7ON. 3,6-Dihydro-ortho-oxazine, preparation, properties, 356.

$C_4H_7O_2Ag$. Silver butyrate, preparation, 603.

$C_4H_8OBr_2$. 1,4-Dibromobutanol, preparation, properties, 695.

$C_4H_8ON_2$. Methylimidazolidone, preparation, 121

$C_4H_8S_2Cl_2$. Ethyl 2,2-dichloroethyl sulfide, preparation, properties, 281.

$C_4H_9O_2N$. β-Aminobutyric acid, preparation, 117.

$C_4H_9O_3P$. 1) Ethyl ethylene phosphite, preparation, properties, action of alkyl halides, 700.

2) Ester of glycolphosphorous acid, preparation, 711.

3) Product of reaction of trimethylene phosphorochloridite and methanol, (methyltrimethylene phosphorochloridite), preparation, properties, 707.

$C_4H_9PCl_2$. Isobutylphosphonous dichloride, preparation, properties, 801.

$C_4H_{11}O_2P$. 1) Dimethyl ethylphosphonite, preparation properties, action of cuprous iodide, carbon tetrachloride, 767.

2) Ethyl hydrogen ethylphosphonite, preparation, properties, 844.

$C_4H_{11}O_4P$. 1) Dimethyl 2-hydroxyethylphosphonate, preparation, properties, 840.

2) Product of reaction of ethyl ethylene phosphite and water, 702.

$C_4H_{12}NBr$. Tetramethylammonium bromide, heat of solution, 395.

4. IV

C_4H_4ONBr. 3-Bromomethylisoxazole, preparation, properties, 101.

C_4H_4ONCl. 3-Chloromethylisoxazole, preparation, properties, sodium ethoxide treatment, 101.

C_4H_4ONI. 3-Iodomethylisoxazole, preparation, properties, 101.

C_4H_5ONCl. 3,6-Dihydro-ortho-oxazine hydrochloride, preparation, action of potash, 356.

$C_4H_8O_2PCl$. 1) Product of reaction of 1,4-butanediol, dimethylaniline and PCl_3, 702.

2) 1-Methyltrimethylene phosphorochloridite, preparation, properties, action of alkyl iodides, 707.

$C_4H_8O_2PCl_3$. Methyl ethyltrichloromethylphosphinate, preparation, properties, 771.

$C_4H_8O_3AsCl$. (Methoxymethyl)ethylene arsenochloridite, preparation, properties, hydrolysis, 807; preparation, 811.

$C_4H_8O_3PAg$. Silver salt of a glycolphosphorous acid, preparation, 712.

$C_4H_8O_3PCl$. 2-Chloroethyl ethylene phosphite, preparation, properties, 700; product of reaction of diethylene glycol, PCl_3 and dimethylaniline, 703.

$C_4H_9OS_2P$. Product of reaction of ethyl iodide and o-ethyl ethylene phosphorodithioite, preparation, hydrolysis, 439.

$C_4H_9OTiCl_3$. Trichloroisobutoxytitane, preparation, 908.

$C_4H_{10}OPCl$. Diethylphosphinic chloride, preparation, properties, 801.

$C_4H_{10}O_2PN$. N-substituted cyclic ester of phosphoramidous acid, preparation, properties, 715.

$C_4H_{11}O_2PS$. Product of reaction of 1:1 atomic sulfur-phosphorus melt with ethanol, 665; product of reaction of P_4S_5 with ethanol, 664; product of reaction of P_4S_6 with ethanol, 664.

$C_4H_{11}O_2PS_2$. Product of reaction of P_4S_7 with ethanol, 663.

4. V

$C_4H_{10}O_2PSCl$. Diethylthiophosphoryl chloride, properties, 664.

$C_4H_{10}O_2PHg_2Cl_4$. Product of reaction of mercuric chloride with triethyl phosphite, 745.

4. VI

$C_4H_{10}O_2PNCuI$. Cuprous iodide compound of N-substituted cyclic ester of phosphoramidous acid, 715.

Group C_5

5. II

$C_5H_6O_4$. Monoethyl malonate, preparation, 637.

C_5H_8O. Vinyl allyl ether, properties, 962.

C_5H_9Br. Methylallyl bromide, preparation, properties, 951.

5. III

$C_5H_4ON_2$. 3-Isoxazoleacetonitrile, preparation, properties, 102.

$C_5H_4O_5Ag_2$. Silver salt of α-ketoglutaric acid, preparation, 692.

C_5H_7ON. Ethylisoxazole, preparation, properties, sodium ethoxide treatment, 100.

$C_5H_9O_2Ag$. Silver dimethylacrylate, preparation, 952.

$C_5H_{11}O_3P$. 1) Ester of glycolphosphorous acid, preparation, 709.

2) Phosphite ester, preparation, properties, 708.

3) Product of reaction of methylphosphorodichloridite and 1,4-butanediol, 702.

$C_5H_{11}O_4As$. (Methoxymethyl)ethylene methyl arsenite, preparation, properties, 809.

$C_5H_{13}O_2P$. 1) Isopropyl hydrogen ethylphosphonite, preparation, properties, 844.
2) Propyl hydrogen ethylphosphonite, preparation, properties, 844.

5. IV

$C_5H_{11}OTiCl_3$. Trichloroisoamyloxytitane, preparation, 909.

$C_5H_{10}O_2PCl_3$. Ethyl ethyltrichloromethylphosphinate, preparation, properties, 771.

$C_5H_{10}O_3AsCl$. (Ethoxymethyl)ethylene arsenochloridite, preparation, properties, 808.

$C_5H_{12}O_3PI$. Product of reaction of methyl iodide and ethyl ethylene phosphite, 701.

5. V

$C_5H_{11}O_3PCuI$. Product of reaction of cuprous iodide on reaction product obtained from methylphosphorochloridite and 1,4-butanediol, 702.

5. VII

$C_5H_{19}O_3PPtCl_2S_3N_6$. Product of reaction of thiourea with $PtCl_2 \cdot 2P(OCH_3)_3$, 741.

Group C_6

6. I

C_6H_6. Benzene, formation from toluene, 149.

C_6H_8. Cyclohexa-1,3-diene, preparation, properties, condensation with nitrosobenzene, 614.

C_6H_{12}. Cyclohexane, preparation from methylcyclohexane, 149.

C_6H_{14}. n-Hexane, isomerization, 171.

6. II

$C_6H_{11}Br$. 4-Bromo-4-methylpent-1-ene, preparation, properties, oxidation, 952.

$C_6H_{12}O$. 1) Vinyl sec.-butyl ether, properties, 962.
2) Vinyl tert.-butyl ether, properties, 962.

$C_6H_{12}Br_2$. Isohexene dibromide, preparation, 951.

$C_6H_{14}O_3$. β-Hydroxyethyl ethyl acetal, preparation, properties, hydrolysis, acetalization, 619.

$C_6H_{14}Si$. Allyltrimethylsilane, preparation, properties, 595.

C_6. III

C_6H_5OAs. Product of reaction of potassium phenylazocarboxylate with arsenic trichloride, 913.

C_6H_5ON. Nitrosobenzene, preparation, condensation of cyclohexa-1,3-diene with, 615.

C_6H_9ON. 1) 3,6-Endoethyleno-3,6-dihydroorthooxazine, preparation, benzoylation, 357.
2) Propylisoxazole, preparation, properties, sodium ethoxide treatment, 100.

$C_6H_{11}ON$. 1) Caprolactam, vinylation, 634.
2) 4,5-Dimethyl-3,6-dihydro-orthooxazine, preparation, 357.

$C_6H_{11}O_2Ag$. Silver salt of α-methyl-valeric acid, preparation, properties, 953.

$C_6H_{11}O_4P$. Ester of glycolphosphorous acid, preparation, properties, 711.

$C_6H_{11}O_7P$. Dimethoxyphosphinylsuccinic acid, preparation, properties, 822.

$C_6H_{12}P_2S_6$. Reaction product of phosphorous trichloride and ethane diol, 439.

$C_6H_{13}O_3P$. 1) Butyl ethylene phosphite, preparation, properties, action of bromotriphenylmethane, 700.
2) Propyl trimethylene phosphite, preparation, properties, 708.
3) Phosphite ester, preparation, properties, 708.
4) Ester of glycolphosphorous acid, preparation, 709.

$C_6H_{13}O_4As$. Ethyl (methoxymethyl)ethylene arsenite, preparation, properties, 810.

$C_6H_{15}O_2P$. 1) Diethyl ethylphosphonite, preparation, properties, action of sulfur, cuprous iodide, ethyl iodide, butyl bromide, carbon tetrachloride, ethyl chloroacetate, diethylcarbamoyl chloride, 767; preparation, properties, 800.
2) Ethyl diethylphosphinate, preparation, properties, 770, 800.
3) Butyl hydrogen ethylphosphonite, preparation, properties, 845.
4) Isobutyl hydrogen ethylphosphonite, preparation, properties, 845.

$C_6H_{15}O_2S$. Product of reaction of P_4S_7 with propanol, 665.

$C_6H_{15}O_4P$. Diethyl 2-hydroxyethylphosphonate, preparation, properties, 839.

$C_6H_{15}PS_2$. Product of reaction of P_4S_6 with isopropanol, 666.

$C_6H_{15}ClSi$. β-Chloropropyltrimethylsilane, preparation, properties, 595.

6. IV

$C_6H_4OAsBr_3$. 2,4,6-Tribromophenylarsine oxide, preparation, 915.

C_6H_4OAsBr. Product of reaction of potassium p-bromophenylazocarboxylate with arsenic trichloride, 914.

$C_6H_5N_2SbCl_4$. May's salt, preparation, 109.

$C_6H_6O_3BrSb$. p-Bromophenylstibonic acid, preparation, 110.

$C_6H_6O_4NAs$. Product of reaction of potassium p-nitrophenylazocarboxylate with arsenic trichloride, 914.

$C_6H_6O_5NSb$. p-Nitrophenylstibonic acid, preparation, 109.

$C_6H_{12}ONCl$. 4,5-Dimethyl-3,6-dihyro-ortho-oxazine hydrochloride, preparation, action of potash, 357.

$C_6H_{12}ONI$. 2-Methyl-3,6-dihydro-ortho-oxazine methiodide, preparation, 356.

$C_6H_{12}O_2PCl_3$. Propyl ethyltrichloromethylphosphinate, preparation, properties, 771.

$C_6H_{12}O_3AsCl$. (Isopropoxymethyl)ethylene arsenochloridite, preparation, properties, 809.

$C_6H_{13}OTiCl_3$. Trichloro-n-hexoxytitane, preparation, 909.

$C_6H_{14}O_2PN$. N-Substituted cyclic ester of phosphoramidous acid, preparation, properties, 716, action of methyl iodide, benzyl bromide, water, 718.

$C_6H_{14}O_3ClP$. 2-Chloroethyl ethyl ethylphosphonate, preparation, properties, 841.

$C_6H_{14}O_3PBr$. Product of reaction of ethyl bromide on ethyl ethylene phosphite, 701.

$C_6H_{14}O_3ClP$. Dipropyl phosphorochloridate, preparation, properties, 820.

$C_6H_{14}O_3PN$. Product of reaction of hydrogen peroxide on N-substituted cyclic ester of phosphoramidous acid, 717.

$C_6H_{15}O_2PS$. 1) Diethyl ethylphosphothionate, preparation, properties, 769.

2) Diethyl ethylphosphonothionate, preparation, properties, 800.

3) Product of reaction of P_4S_7 with isopropanol, 665.

4) Product of reaction of P_4S_6 with n-propanol, 665.

$C_6H_{15}O_2PS_2$. 1) Product of reaction of P_4S_5 with ethanol, 664.

2) Product of reaction of P_4S_6 with ethanol, 664.

$C_6H_{15}O_2PS_2$. 3) Product of reaction of P_4S_7 with ethanol, 663.

4) Product of reaction of P_4S_7 with isopropanol, 665.

5) Product of reaction of 1:1 atomic sulfur-phosphorus melt with ethanol, 665.

6) Product of reaction of P_4S_7 with propanol, 665.

$C_6H_{15}O_2PSe$. Diethyl ethylphosphonoselenonate preparation, properties, 800.

$C_6H_{15}O_3PS$. 1) Diethyl 2-mercaptoethylphosphonate, preparation, properties, 816.

2) Diethyl-1-hydroxyethylphosphonothionate, preparation, properties, 829.

$C_6H_{18}O_6PtI_2$. Product of reaction of potassium iodide with $PtCl_2 \cdot 2P(OCH_3)_3$, 741.

$C_6H_{19}ONCl$. 3,6-Endoethyleno-3,6-dihydro-ortho-oxazine hydrochloride, preparation, action of potash, 357.

6. V

$C_6H_{10}O_3PCl_2Pt$. Product of reaction of ethanol with $PtCl_2 \cdot PCl_3$, 740.

$C_6H_{13}OSHgCl$. β-Isobutoxyethylmercaptomercuric chloride, preparation, 461.

$C_6H_{13}O_6P_2Cl_2Pt$. Product of reaction of methanol with $PtCl_2 \cdot 2PCl_3$, 740.

$C_6H_{14}O_2PNS$. Sulfur compound of N-substituted cyclic ester of phosphoramidous acid, preparation, properties, 716.

$C_6H_{15}O_3PHgBr_2$. Product of reaction of mercuric bromide with triethyl phosphite, 745.

$C_6H_{15}O_3PHgCl_2$. Product of reaction of mercuric chloride with triethyl phosphite, 744.

$C_6H_{15}O_3P_2Cl_2Pt$. Product of reaction of ethanol with $PtCl_2 \cdot 2PCl_3$, 740.

6. VI

$C_6H_{14}O_2PNCuBr$. Cuprous bromide compound of N-substituted cyclic ester of phosphoramidous acid, preparation, 716.

Group C_7

7. I

C_7H_8. Toluene, reactions in contact with aluminum chloride, 149.

C_7H_{14}. 1) Dimethylcyclopentanes, preparation, properties, 151.

C_7H_{14}. 2) Methylcyclohexane, reactions of, in contact with aluminum chloride, 149.
3) 1-Methyl-3-ethylcyclobutane, cis and trans- preparation, 321.
C_7H_{16}. 2,2-Dimethylpentane, preparation, properties, 951.

7. II

$C_7H_{10}O_3$. 5-Carbomethoxypent-1-en-3-one, preparation, 313.

$C_7H_{11}O$. Hexahydrobenzaldehyde, preparation, 295.

$C_7H_{12}O$. 3-Acetyl-1-methylcyclobutane, preparation, 320.

$C_7H_{13}N$. Aldehyde-ammonia compound of hexahydrobenzaldehyde, preparation, properties, 295.

$C_7H_{16}Si$. Trimethyl-but-3-enylsilane, preparation, properties, 991.

7. III

C_7H_7OAs. Product of reaction of potassium p-tolylazocarboxylate with arsenic trichloride, 914.

C_7H_7OSb. p-Stibosotoluene, preparation, 109.

C_7H_9ON. Amide of 2,3-dihydrobenzoic acid (cyclohexa-1,3-diene-1-carboxylic acid), preparation, 692.

$C_7H_9O_2P$. Methyl hydrogen phenylphosphonite, preparation, 804.

$C_7H_{11}ON$. Isobutylisoxazole, preparation, properties, 100.

$C_7H_{15}O_2Cl$. β-Chloroethyl isopropyl acetal, synthesis and properties, 187.

$C_7H_{15}O_4As$. (Methoxymethyl)ethylene propyl arsenite, preparation, properties, 810.

$C_7H_{17}O_2N$. β-Aminoethyl isopropyl acetal, synthesis and properties, 189.

7. IV

$C_7H_7OSbCl_2$. Oxychloride of p-tolylstibonic acid, preparation, properties, 109.

$C_7H_{14}O_2PN$. N-substituted cyclic ester of phosphoramidous acid, preparation, properties, 717.

$C_7H_{14}O_3AsCl$. (Butoxymethyl)ethylene arsenochloridite, preparation, properties, 809.

$C_7H_{15}O_3PS$. Diethyl-1-hydroxy-2-propenylphosphonothionate, preparation, properties, preparation of phenylhydrazone, semicarbazone, 829.

$C_7H_{17}O_3PS$. Diethyl-1-hydroxy-1-methylethylphosphonothionate, preparation, properties, 829.

7. V

$C_7H_{15}OSHgCl$. β-Isoamyloxyethylmercaptomercuric chloride, properties, 462.

7. VI

$C_7H_{14}O_2PNCuCl$. Cuprous chloride compound of N-substituted cyclic ester of phosphoramidous acid, preparation, 717.

7. VIII

$C_7H_{27}O_3PPtCl_2S_3N_6$. Product of reaction of thiourea with $PtCl_2 \cdot 2P(OC_2H_5)_3$, 741.

Group C_8

8. I

C_8H_8. Stytene, preparation, 477; from catalytic dehydrogenation of ethylbenzene, 559.

C_8H_{10}. 1) Ethylbenzene, catalytic dehydrogenation, 559.
2) Xylenes, preparation, 149.

C_8H_{14}. 1) Biisocrotyl, synthesis, properties, catalytic hydrogenation, 411.
2) 2,5-Dimethyl-2,4-hexadiene, synthesis, catalytic hydrogenation, isomerization, 411.

C_8H_{16}. 1) Dimethylcyclohexane, preparation, 149.
2) Ethylcyclohexane, catalytic dehydrogenation, 477.
3) 4-Methylhept-1-ene, preparation, properties, 951.

8. II

$C_8H_{12}O_2$. Alcohol formed by condensing tetrinic acid with but-1-en-3-one, 317.

$C_8H_{12}O_3$. 1-Methylcyclohexan-4-one-1-carboxylic acid; preparation, 646.

$C_8H_{13}O_3$. β-Hydroxyethylbutylacetal, preparation, properties, hydrolysis, acetalization, 621.

$C_8H_{14}O$. Cyclohexylvinyl ether, synthesis, properties, 455, 465.

$C_8H_{14}O_2$. Diallyl acetal, preparation, properties, 960.

$C_8H_{16}O$. Hexylvinyl ether, preparation, properties, 465.

$C_8H_{16}O_2$. Oxoctenol, preparation, 168.

$C_8H_{16}Si$. Trimethylcyclopentadienylsilane, preparation, properties, 990.

8. III

$C_8H_{11}O_2P$. Ethyl hydrogen phenylphosphonite, preparation, addition to methyl methacrylate, methyl acrylate, ethyl methacrylate, propyl methacrylate, 805.

$C_8H_{13}NO$. Vinylcaprolactam, Preparation, properties, hydrolysis, polymerization, reaction with hydrogen peroxide, 629; N-Vinylcaprolactam, preparation, properties, polymerization, 633.

$C_8H_{15}ON_3$. Semicarbazone of 3-acetyl-1-methylcyclobutane, preparation, 320.

$C_8H_{15}O_7P$. 1) Dimethyl dimethoxyphosphinylsuccinate, preparation, properties, 823.

2) Diethoxyphosphinylsuccinic acid, preparation, properties, 823.

$C_8H_{17}O_2Cl$. β-Chloroethyl isobutyl acetal, synthesis and properties, 188.

$C_8H_{17}O_3P$. 1) Butyl tetramethylene phosphite, preparation, properties, 703.

2) Butyl 1-methyltrimethylene phosphite, preparation, properties, 709.

$C_8H_{17}O_4As$. Butyl(methoxymethyl)ethylene arsenite, preparation, properties, 810.

$C_8H_{17}O_4P$. Ethyl(ethoxycarbonylmethyl) ethylphosphinate, preparation, properties, 771.

$C_8H_{19}O_2N$. β-Aminoethyl isobutyl acetal, preparation and properties, 190.

$C_8H_{19}O_2P$. 1) Propyl ethylpropylphosphinate, preparation, properies, 770.

2) Ethyl butylethylphosphinate, preparation, properties, 770.

3) Dipropyl ethylphosphonite, preparation, properties, action of cuprous iodide, propyl iodide, carbon tetrachloride, ethyl chloroacetate, diethylcarbamoyl chloride, 767.

4) Diisopropyl ethylphosphinite, preparation, properties, action of sulfur, 768.

5) Hexyl hydrogen ethylphosphonite, preparation, properties, 845

$C_8H_{19}O_3P$. (Ethyl)-hexylphosphorous acid, preparation, properties, 488.

8. IV

$C_8H_9O_4NS$. p-Carbomethoxyaminobenzenesulfinic acid, preparation, formation of silver salt, methyl ester, potassium salt, 919.

$C_8H_{11}O_4N_3S$. Hydrazide of p-carbomethoxyaminobenzenesulfonic acid, preparation, formation of compounds with benzaldehyde, acetone, 920.

$C_8H_{13}O_2PN$. N-substituted cyclic ester of phosphoramidous acid, preparation, properties, action of ethyl bromide, 719.

$C_8H_{15}O_2PN$. N-substituted cyclic ester of phosphoramidous acid, preparation, 717.

$C_8H_{18}O_3ClP$. 1) 2-Chloro-1-methylpropyldiethyl phosphite, preparation, properties, 841.

2) Dibutyl phosphorochloridate, preparation, properties, 819.

$C_8H_{18}O_4NP$. β-Diethylphosphoneisobutyramide, preparation, properties, 658.

$C_8H_{19}O_2PS$. 1) Diisopropyl ethylphosphonothionate, preparation, properties, 769.

2) Product of reaction of P_4S_7 with n-butanol, 666.

$C_8H_{19}O_3PS$. 1) Diethyl 1-hydroxybutylphosphonothionate, preparation, properties, 830.

2) Diethyl 2-ethylmercaptoethylphosphonate, preparation, properties, 816.

8. V

$C_8H_{20}O_4P_2S_4Pb$. Lead diethyl dithiophosphate, preparation, ethylation, 664.

8. VI

$C_8H_{16}O_2PNCuBr$. Cuprous bromide compound of N-substituted cyclic ester of phosphoramidous acid, preparation, properties, 717.

Group C_9

9. II

$C_9H_{10}O_3$. Anhydride of trans-1-methylcyclohex-4-ene-1,2-dicarboxylic acid, preparation, isomerization, 305.

$C_9H_{12}O_2$. Cis-1-methylcyclohexane-1,2-dicarboxylic anhydride, preparation, hydrolysis, 304.

$C_9H_{12}O_3$. 1) Methyl-3-methylenopentan-4-one-1-carboxylate, preparation, oxidation, 313.

2) Trans-1-methylcyclohexane-1,2-dicarboxylic acid anhydride, preparation, 305.

$C_9H_{12}O_4$. 1) Diketone formed by condensation of tetrinic acid with but-1-en-3-one, 317.

2) Trans-1-methylcyclohex-4-ene-1,2-dicarboxylic acid, preparation, isomerization, hydrogenation, 304.

$C_9H_{12}O_5$. 1-Methylcyclohexan-4-one-1,3-dicarboxylic acid, preparation, 646.

$C_9H_{14}O$. Benzyl vinyl ether, synthesis, properties, 456.

$C_9H_{14}O_2$. Cyclohexylacrylic acid, preparation, properties, 296.

$C_9H_{14}O_3$. 1-Carbomethoxy-1-methylcyclohexan-4-one, preparation, 646.

$C_9H_{14}O_4$. Trans-1-methylcyclohexane-1,2-dicarboxylic acid, preparation, isomerization, 305.

$C_9H_{14}O_5$. Heptan-3-one-1,6-dicarboxylic acid, preparation, 317.

$C_9H_{18}O$. Heptylvinyl ether, preparation, properties, 465.

$C_9H_{18}Si$. Dimethyl-di-methylallyl silane, preparation, properties, 990.

$C_9H_{19}O_2$. Di-sec-butyl, acetal, preparation, properties, 960.

9. III

C_9H_9ON. Cinnamamide, preparation, 638.

$C_9H_{13}O_2P$. Isopropyl hydrogen phenylphosphonite, preparation, 805.

$C_9H_{16}ON_2$. 5-Cyclohexylglyoxalidone, preparation, 298.

$C_9H_{17}O_2N$. β-Amino-β-cyclohexyl-propionic acid, preparation, properties, 296.

$C_9H_{17}PO_4$. Methyl ester of 1-methyl-3-oxocyclohexylphosponic acid, preparation, 521.

$C_9H_{18}O_4N_2$. Diurethan of propylenediamine, preparation, 121.

$C_9H_{18}O_6As_2$. Trimethylene ester of arsenious acid, preparation, properties, 809.

$C_9H_{19}O_4P$. Propyl(ethoxycarbonylmethyl)-ethylphosphinate, preparation, properties, 771.

$C_9H_{21}SiBr$. Trimethyl-4-bromo-2-methylpentylsilane (δ-bromide), preparation, properties, 596.

$C_9H_{21}O_2P$. Dibutyl ethylphosphonite, preparation, properties, 768.

$C_9H_{21}O_3P$. 1) Dibutyl methylphosphonate, preparation, properties, 791.
2) Ethyl hexyl methylphosphonate, preparation, properties, 792.

$C_9H_{21}O_5P$. Addition product of diethylphosphorous acid to 1,2-epoxy-3-ethoxypropane, 840.

9. IV

$C_9H_{11}O_4NS$. Methyl p-carbomethoxyaminobenzenesulfonate, preparation, 919.

$C_9H_{11}O_5NS$. Methyl p-carbomethoxyaminobenzenesulfonate, preparation, formation of product with phenylmethylpyrazolone, 919.

$C_9H_{18}O_2PN$. N-substituted cyclic ester of phosphoramidous acid, preparation, properties, action of water, 719.

$C_9H_{19}O_3PS$. Diethyl 1-methyl-3-oxobutylphosphonothionate, preparation, properties, preparation of phenylhydrazone, semicarbazone, 827.

$C_9H_{20}O_3PN$. Diethylamide of ethoxy(ethyl)phosphinylformic acid, preparation, properties, 771.

$C_9H_{20}O_4PN$. 1) N,N-Diethyl(dialkoxyphosphinyl)formamide derivative, dipole moments, 781.
2) N,N-Diethyl(diethoxyphosphinyl) formamide, preparation, properties, 759.

$C_9H_{21}O_2PS_2$. 1) Product of reaction of P_2S_7 with ethanol, 665.
2) Product of reaction of P_2S_7 with isopropanol, 665.
3) Product of reaction of P_2S_6 with n-propanol, 665.

9. V

$C_9H_{21}O_3PAgBr$. Compound of silver bromide and triisopropyl phosphite, preparation, 732.

$C_9H_{21}O_3PAgCl$. Compound of silver chloride and triisopropyl phosphite, preparation, 732.

$C_9H_{21}O_3PAgI$. Compound of silver iodide with triisopropyl phosphite, preparation, 733.

$C_9H_{21}O_3PHgBr_2$. Product of reaction of mercuric bromide with triisopropyl phosphite, 745.

$C_9H_{21}O_3PHgCl_2$. Product of reaction of mercuric chloride with triisopropyl phosphite, 745.

$C_9H_{21}O_3PHgI_2$. Product of reaction of mercuric iodide with triisopropyl phosphite, 745.

$C_9H_{21}O_3P_2Cl_2Pt$. Product of reaction of triisopropyl phosphite with platinous chloride, 740.

9. VIII

$C_9H_{27}O_3PPtS_3N_6Cl_2$. Product of reaction of thiourea with $PtCl_2 \cdot 2P(OC_3H_7\text{-}i)_3$, 742.

Group C_{10}

10. II

$C_{10}H_9N$. 1-Phenylpyrrole, preparation, reduction, 533.

$C_{10}H_{11}N$. 1) 1-Phenyl-3-pyrroline, preparation, reduction, oxidation, 524.
2) Reduction product of 1-phenylpyrrole, 533;
3) Reduction product of 1-phenylpyrrole, 535.

$C_{10}H_{13}N$. 1) 1-Phenylpyrrolidine, preparation, properties, 525; 535.
2) N-2-Butenylaniline, preparation, properties, 526.
3) Reduction product of 1-phenylpyrrole, 533.

$C_{10}H_{14}O_4$. Keto-ester obtained by condensing tetrinic acid with but-1-en-3-one, 317.

$C_{10}H_{15}N$. N-Butylaniline, preparation, properties, benzoylation, 527.

$C_{10}H_{16}O_3$. 1-Carbomethoxy-4-methoxy-1-methylcyclohex-3-ene, preparation, 646.

$C_{10}H_{16}O_6$. Cyclic ester of triethylene glycol with succinic acid, preparation, 779.

$C_{10}H_{20}O$. 1) Isooctylvinyl ether, preparation, properties, 465.
2) Octylvinyl ether, preparation, properties, 465.

$C_{10}H_{20}Si$. Methylallylsilane, preparation, properties, 990.

$C_{10}H_{21}Cl$. 2,2-Dipropylbutyl chloride, preparation, 946.

$C_{10}H_{22}O_2$ Di-tert.-butyl acetal, preparation properties, 960.

10. III

$C_{10}H_7SbO$. β-Stibosonaphthalene, preparation, 110.

$C_{10}H_9O_2As$. β-Naphthyl arsenious acid, preparation, 915.

$C_{10}H_9O_3N$. Methoxymethyl ether of isatin, preparation, 447.

$C_{10}H_9O_5N_3$. 2-(2',4'-Dinitrophenyl)-3,6-dihydro-ortho-oxazine, preparation, 357.

$C_{10}H_{10}O_8N_4$. Picrate of 3,6-dihydro-ortho-oxazine, preparation, 356.

$C_{10}H_{11}ON$. 2-Phenyl-3,6-dihydro-ortho-oxazine, preparation, reduction, 341.

$C_{10}H_{11}O_3N$. N-acetyl-N-phenylglycine, preparation, 342.

$C_{10}H_{13}ON$. 1) 3-Hydroxy-1-phenylpyrrolidine, preparation, acetylation, 696.
2) 2-Phenyl-tetrahydro-ortho-oxazine, preparation, properties, reduction, 342.

$C_{10}H_{13}O_3P$. Product of reaction of methyltrimethylene phosphite and benzyl chloride, 710.

$C_{10}H_{13}O_3N_3$. 1-Carbomethoxy-1-methylcyclohex-2-en-4-one, preparation, 647.

$C_{10}H_{13}O_4As$. (Methoxymethyl)ethylene phenyl arsenite, preparation, properties, 811.

$C_{10}H_{15}ON$. 1) 4-Anilinobutan-1-ol, preparation, properties, 343; 4-anilinobutan-1-ol, properties, 344.
2) Hydrolysis product of N-2-butenylacetanilide, 528.
3) Product of hydrolysis of benzoyl derivative of N-2-butenylaniline, 534.

$C_{10}H_{16}O_2N_2$. 6-Cyclohexyldihydrouracil, preparation, 299.

$C_{10}H_{17}O_5N_3$. Semicarbazone of heptan-3-one-1,6-dicarboxylic acid, preparation, 317.

$C_{10}H_{18}O_3N_2$. β-Ureido-β-cyclohexylpropionic acid, preparation, 299.

$C_{10}H_{19}O_4As$. Cyclohexyl(methoxymethyl)-ethylene arsenite, preparation, properties, 811.

$C_{10}H_{19}O_7P$. Dimethyl diethoxyphosphinylsuccinate, preparation, properties, 823.

$C_{10}H_{21}O_3P$. Dibutyl phosphonate, preparation, properties, 815.

$C_{10}H_{21}O_4P$. 2-Hydroxycyclohexylphosphonate, preparation, properties, 841.

$C_{10}H_{21}O_5P$. Ethyl β-diethylphosphoneisobutyrate, preparation, properties, 659.

$C_{10}H_{23}O_3P$. 1) (Ethyl)-octylphosphorous acid, preparation, properties, 488.
2) Octyl hydrogen ethylphosphonite, preparation, properties, 845.

$C_{10}H_{27}O_4As$. Hexyl (methoxymethyl)ethylene arsenite, preparation, properties, 810.

10. IV

$C_{10}H_{11}O_3N_3S$. Product of hydrolysis of p-acetamidophenyl-N-methyl-pyrazolonesulfone, 921.

$C_{10}H_{14}O_2PN$. N-substituted cyclic ester of phosphoramidous acid, preparation, properties, action of cuprous iodide, 719.

$C_{10}H_{15}O_2PS$. Product of reaction of P_4S_6 with isopropanol, 666.

$C_{10}H_{20}O_3ClP$. 2-Chlorocyclohexyl diethyl phosphite, preparation, properties, 842.

$C_{10}H_{20}O_4NP$. β-Dipropylphosphoneisobutyramide, preparation, 658.

$C_{10}H_{21}O_3Cl_2P$. bis(2-Chloro-1-methylpropyl)-ethyl phosphite, preparation, properties, 841.

$C_{10}H_{21}O_3PS$. Diethyl 1,1-dimethyl-3-oxobutylphosphonothionate, preparation, properties, preparation of phenyl-hydrazone, semicarbazone, 828.

$C_{10}H_{22}O_3PN$. Diethylamide of ethyl(propoxy)phosphinyl formic acid, preparation, properties, 772.

10. V.

$C_{10}H_{22}N_3O_3PS$. Semicarbazone of diethyl 1-methyl-3-oxobutylphosphonothionate, preparation, 827.

10. VI

$C_{10}H_{21}O_3PCuNS$. Complex compound of triisopropyl phosphite with cuprous thiocyanate, preparation, 733.

Group C_{11}

11. I

$C_{11}H_{20}$. Di-(3-methylcyclobutyl)-methane, preparation, properties, 322.

11. II

$C_{11}H_8O$. β-naphthaldehyde, preparation, properties, 125.

$C_{11}H_{13}N$. 1-p-Tolyl-2,5-dihydropyrrole, preparation, oxidation, 609.

$C_{11}H_{14}O_2$. 1) Allyl phenyl acetal, preparation, properties, hydrolysis, 960.

2) Chromanone formed from triketone obtained by condensing 2-methyldihydroresorcinol with but-1-en-3-one, 315.

$C_{11}H_{15}N$. N-Crotyl-p-toluidine, preparation, properties benzoylation, acetylation, 610.

$C_{11}H_{16}Si$. Phenylallyldimethylsilane, preparation, properties, 595.

$C_{11}H_{16}O_3$. 1) Keto-acid formed by condensing 2-methyldihydroresorcinol with but-1-en-3-one, 314.

2) Triketone formed by condensing 2-methyldihydroresorcinol with but-1-en-3-one. 314.

$C_{11}H_{16}O_4$. 1) Dimethyl cis-1-methylcyclohex-4-ene-1, 2-dicarboxylate, preparation, isomerization, 306.

2) Dimethyl-trans-1-methylcyclohex-4-ene-1,2-dicarboxylate, preparation, 306.

$C_{11}H_{18}O_4$. Dimethyl trans-1-methylcyclohexane-1,2-dicarboxylate, preparation. 306.

$C_{11}H_{22}O$. Nonylvinyl ether, preparation, properties 465.

$C_{11}H_{26}Si$. Ethyltripropylsilane, preparation, properties, 596.

11. III

$C_{11}H_9O_6N_3$. 2-(3',5'-Dinitrobenzoyl)-3,6-dihydro-orthoxazine. preparation, 357.

$C_{11}H_{10}O_4N_2$. 4-Piperonyldihydrouracil, preparation, 641.

$C_{11}H_{11}NO_2$. Carbostyril methoxymethyl ether, preparation, hydrolysis, isomerization, 748.

$C_{11}H_{11}O_3N$. Ethoxymethyl ether of isatin, preparation, 448.

$C_{11}H_{12}N_2O$. 4-Methyl-6-oxo-2-phenyl-tetrahydropyrimidine. preparation, 119.

$C_{11}H_{13}ON$. 2-p-Tolyl-3,6-dihydro-orthoxazine, preparation, reduction, 608.

$C_{11}H_{13}O_3N$. 1) N-Acetyl-N-tolylglycine, preparation, 609.

2) β-Benzamidobutyric acid, preparation 118.

$C_{11}H_{14}O_2N_2$. β-Benzamidobutyramide, preparation, 119.

$C_{11}H_{14}O_4N_2$. Ethyl ester of β-(3-nitrophenyl)-β-alanine. preparation, 640.

$C_{11}H_{15}ON$. 1) 3-Hydroxy-1-p-tolylpyrrolidine, preparation, 696.

2) 4-p-Tolylaminobut-2-en-1-ol, preparation, benzoylation, acetylation, 608.

$C_{11}H_{15}O_2N$. Ethyl-β-phenyl-β-alanine, preparation, 638.

$C_{11}H_{15}O_3P$. Ester of glycolphosphorous acid, preparation, 711.

$C_{11}H_{17}O_3Br$. Ethyl 1-(3-bromopropyl)-2-oxocyclopentane carboxylate, preparation, properties, 421.

$C_{11}H_{17}O_3Cl$. Ethyl 1-(3-chloropropyl)-2-oxocyclopentanecarboxylate, preparation, properties, 421.

$C_{11}H_{19}O_3N$. N-carbomethoxycyclohexylglyoxalidone, preparation, 299.

$C_{11}H_{18}O_4N_6$. Semicarbazone of diketone formed by condensation of tetrinic acid with but-1-en-3-one, 317.

$C_{11}H_{19}O_3N$. β-Acetamido-β-cyclohexylpropionic acid, preparation, properties, 297.

$C_{11}H_{19}O_4N$. β-Carbomethoxyamino-β-cyclohexylpropionic acid, preparation, properties, 297.

$C_{11}H_{20}O_2N_2$. β-Acetamido-β-cyclohexyl-propionamide, preparation, Hoffmann reaction, 298.

$C_{11}H_{20}O_3N_2$. Amide of β-carbomethoxyamino-β-cyclohexylpropionic acid, preparation, properties, 297.

$C_{11}H_{21}O_3P$. Diethyl 2-methyl-3-cyclohexenylphosphonate, preparation, properties, 816.

$C_{11}H_{21}O_4P$. 1) Ethyl ester of 2,5-dimethyl-3-oxocyclopentylphosphonic acid, preparation, properties, 520.

2) Ethyl ester of 1-methyl-3-oxocyclohexylphosphonic acid, preparation, properties, 521.

$C_{11}H_{21}O_5P$. Allyl-β-diethylphosphoneisobutyrate, preparation, properties, 660.

$C_{11}H_{23}O_5P$. 1) Isopropyl β-diethylphosphoneisobutyrate, preparation, properties, 659.

2) Propyl β-diethylphosphoneisobutyrate, preparation, properties, 659.

$C_{11}H_{25}O_2P$. Nonyl hydrogen ethylphosphonite, preparation, properties, 846.

$C_{11}H_{25}O_3P$. Ethyl octyl methylphosphonate, preparation, properties, 792.

$C_{11}H_{26}SiO$. 6-Trimethylsilyl-3,5-dimethylhexanol, preparation, properties. 597.

11. IV

$C_{11}H_{15}O_4N_3S$. p-Carbomethoxyaminophenylsulfonylhydrazone of acetone, preparation, 921.

$C_{11}H_{16}O_2PN$. N-substituted cyclic ester of phosphoramidous acid, preparation, properties, 720.

$C_{11}H_{17}O_4PS$. Diethyl 3-furyl-1-hydroxy-2-propenylphosphonothionate, preparation, properties, 829.

$C_{11}H_{24}O_4PN$. 1) N,N-Diethyl(dialkoxyphosphinyl formamide derivative, dipole moments, 781.
2) N,N-Diethyl(diisopropoxyphosphinyl)formamide, preparation, properties, 761.
3) N,N-Diethyl(dipropoxyphosphinyl) formamide, preparation, properties, 761.

11. V

$C_{11}H_{21}N_3O_3PS$. Semicarbazone of diethyl 1,1-dimethyl-3-oxobutylphosphonothionate, preparation, 828.

Group C_{12}

12. II

$C_{12}H_{14}N$. N-(β-naphthal)-methylamine, preparation, properties, 126.

$C_{12}H_{14}O_3$. 1-Phenoxyethyl methacrylate, synthesis, properties, 457.

$C_{12}H_{14}O_4$. β-Piperonylacrylate, preparation, 639.

$C_{12}H_{15}N$. 3-Anilinocyclohex-1-ene, preparation, properties, benzoylation, 616.

$C_{12}H_{18}O$. 6-Keto-1,9-dimethyl-Δ'-octalin, preparation, action of magnesium methyl iodide, 645.

$C_{12}H_{18}O_2$. 1) sec.-Butyl phenyl acetal, preparation, properties, 960.
2) tert.-Butyl phenyl acetal, preparation, hydrolysis, properties, 960.

$C_{12}H_{20}Si$. Tetraallylsilane, preparation, properties, 538.

$C_{12}H_{20}O_2$. 6-Keto-1-hydroxy-1,9-dimethyldecalin, preparation, dehydration, 644.

$C_{12}H_{20}O_3$. 1-Cyclohexyloxyethyl methacrylate synthesis, properties, 456.

$C_{12}H_{20}O_6$. Cyclic ester of triethylene glycol with adipic acid, preparation, 778.

$C_{12}H_{22}Si$. Triallylpropylsilane, preparation, properties, 595.

$C_{12}H_{24}O$. Decylvinyl ether, preparation, properties, 465.

$C_{12}H_{26}Si$. Allyltripropylsilane, preparation, properties, 595.

$C_{12}H_{28}Si$. Silicohydrocarbon, properties, 986.

$C_{12}H_{30}Si_2$. 1,4-Di-(trimethylsilyl)-2,3-dimethylbutane, preparation, properties, 596.

12. III

$C_{12}H_5O_4N$. Ethyl ester of β-piperonyl-β-alanine, preparation, 639.

$C_{12}H_{10}SbCl_3$. Chlorodiphenylstibine dichloride, preparation, properties, 108.

$C_{12}H_{12}O_8N_4$. Picrate of 3,6-endoethyleno-3,6-dihydro-ortho-oxazine, preparation, 358.

$C_{12}H_{13}ON$. 1) Carbostyril ethoxymethyl ether, preparation, hydrolysis, isomerization, 749.
2) 2-Phenyl-3,6-endoethyleno-3,6-dihydro-orthoxazine, preparation, 615.

$C_{12}H_{13}O_3N$. Propoxymethyl ether of isatin, preparation, properties, 448.

$C_{12}H_{14}O_8N_4$. Picrate of 4,5-dimethyl-3,6-dihydro-ortho-oxazine, 357.

$C_{12}H_{15}ON$. 1) 4-Anilinocyclohex-2-en-1-ol, preparation, acetylation, reduction, 615.
2) N-2-Butenylacetanilide, preparation, properties, oxidation, hydrolysis, 527.
3) 3,6-Dihydro-4,5-dimethyl-2-phenyl-1,2,2H-oxazine, preparation, 540.

$C_{12}H_{15}O_2N$. 3-Acetoxy-1-phenylpyrrolidine, preparation, properties, 696.

$C_{12}H_{15}O_3P$. Cyclohexyl o-phenylene phosphite, preparation, properties, 727.

$C_{12}H_{16}N_2O$. 1-α-Pyridyl-2,5-dimethyl-4-piperidone, preparation, 930.

$C_{12}H_{17}ON$. 2,3-Dimethyl-4-phenylamino-2-buten-1-ol, preparation, properties, acetylation, 540.

$C_{12}H_{17}O_4P$. Ethyl (2-methoxycarbonylethyl)-phenylphosphinate, preparation, properties, 805.

$C_{12}H_{17}O_5N$. 1) Acid oxalate of 4-anilinobutan-1-ol, preparation, 344.
2) 4-anilinobut-1-yl hydrogen oxalate, preparation, 343.

$C_{12}H_{19}O_2P$. Hexyl hydrogen phenylphosphonite, preparation, addition to methyl methacrylate, 805.

$C_{12}H_{19}O_3N_3$. 1) Semicarbazone of keto-acid formed by condensing 2-methyldihydroresorcinol with but-1-en-3-one, 314.
2) Semicarbazone obtained from hydrolytic decomposition products of 1,6-diketo-9-methyl-Δ^5-octalin, 316.

$C_{12}H_{21}ON_3$. Semicarbazone of di-(3-methylcyclobutyl) ketone, 321.

$C_{12}H_{23}O_3P$. 1) Dicyclohexylphosphorous acid, preparation, properties, 724.

2) Dibutyl 2,5-dimethyl-3-cyclohexenylphosphonate, preparation, properties, 817.

$C_{12}H_{23}O_7P$. Diethyl diethoxyphosphinylsuccinate, preparation, properties, 824.

$C_{12}H_{24}O_9As_2$. (Methoxymethyl) ethylene ester of arsenious acid, preparation, properties, 807.

$C_{12}H_{24}O_{10}P_2$. Diethyl bis(dimethoxyphosphinyl)succinate, preparation, properties, 824.

$C_{12}H_{25}O_5P$. 1) Butyl β-diethylphosphoneisobutyrate, preparation, properties, 659.

2) Isobutyl β-diethylphosphoneisobutyrate, preparation, properties, 659.

$C_{12}H_{26}O_2S$. 1) β,β'-Dibutoxydiethyl sulfide, properties, 460.

2) α, β-Diisobutoxydiethyl sulfide, properties, 461.

$C_{12}H_{27}SiCl$. Tributylchlorosilane, preparation, properties, 537.

$C_{12}H_{27}O_2P$. 1) Decyl hydrogen ethylphosphonite, preparation, properties, 846.

2) Diisobutyl isobutylphosphonite, preparation, properties, 801.

3) Isobutyl diisobutylphosphinate, preparation, properties, 802.

$C_{12}H_{28}SiO_3$. Triallylcyclohexylsilane, preparation, properties, 537.

12. IV

$C_{12}H_{13}O_4N_3S$. p-Acetamidophenyl-N-methylpyrazolonesulfone, preparation, hydrolysis, 921.

$C_{12}H_{13}O_5N_3S$. p-Carbomethoxyaminophenyl-N-3-methylpyrazolonesulfone, preparation, 920.

$C_{12}H_{17}N_2OCl$. Monohydrochloride of 1-α-pyridyl-2,5-dimethyl-4-piperidone, preparation, 930.

$C_{12}H_{19}O_4PS$. Diethyl 1-furyl-3-oxobutylphosphonothionate, preparation, properties, 828.

$C_{12}H_{22}O_2PCl$. Dicyclohexyl phosphorochloridite, preparation, properties, 725.

$C_{12}H_{26}O_4NP$. β-Dibutylphosphoneisobutyramide, preparation, properties, 658.

$C_{12}H_{27}O_2PS$. Diisobutyl isobutylphosphonothionate, preparation, properties, 801.

$C_{12}H_{27}O_2PS_2$. Product of reaction of P_4S_7 with n-butanol, 666.

$C_{12}H_{27}O_2PSe$. Diisobutyl isobutylphosphonoselenonate, preparation, properties, 801.

$C_{12}H_{27}O_3PS$. Dibutyl 2-ethylmercaptoethylphosphonate, preparation, properties, 816.

$C_{12}H_{27}O_3TiCl$. 1) Tri-isobutoxytitanium chloride, preparation, properties, 83.

2) Tri-n-butoxytitanium chloride, preparation, properties, 83.

3) Tri-β-ethoxyethoxytitanium chloride, preparation, properties, 84.

12. V

$C_{12}H_5O_3PCuBr$. Cuprous bromide compound of cyclo hexyl o-phenylene phosphite, preparation, 727.

$C_{12}H_{26}O_2SHgCl_2$. Compound of β,β'-diisobutoxydiethyl sulfide with mercuric chloride, 460.

$C_{12}H_{30}O_6P_2PtI_2$. Product of reaction of potassium iodide with $PtCl_2 \cdot 2P(OC_2H_5)_3$, 741.

12. VII

$C_{12}H_{15}O_2PCuCNS$. Complex compound of benzyl-1-methyltrimethylene phosphite and cuprous thiocyanate, preparation, 733.

$C_{12}H_{33}O_3PPtS_3N_6Cl_2$. Product of reaction of thiourea with $PtCl_2 \cdot 2P(OC_3H_7\text{-}i)_3$, 742.

Group C_{13}

13. I

$C_{13}H_{20}$. 1) Dehydration product of 1,6-dihydroxy-1,6,9-trimethyldecalin, 646.

2) 1,6,9-Trimethyl-Δ-1,6-hexalin, preparation, dehydrogenation, 645.

$C_{13}H_{24}$. Tridecadiene, preparation, properties, oxidation, 952.

$C_{13}H_{28}$. Tetrapropylmethane, preparation, properties, 946.

13. II

$C_{13}H_{16}O_3$. 1-Benzyl-oxyethyl methacrylate, synthesis, properties, 456.

$C_{13}H_{16}O_4$. 1,6-Diketo-9-methyl-5-carboxymethyl-Δ^5-octalin, preparation, 316.

$C_{13}H_{18}O_2$. 1-Ethynyltetrahydro-1-hydroxy-3,7a-dimethyl-5(4H)-indandione, preparation, 431.

$C_{13}H_{18}O_5$. Ketodicarboxylic acid formed by hydrolytic decomposition of product of condensation of 2-methyl-dihydroresorcinol with 5-carbomethoxy-pent-1-en-3-one, 316.

$C_{13}H_{20}O_2$. Tetrahydro-1-hydroxy-3,7a-dimethyl-1-vinyl-6(5H)-indanone, preparation, 432.

$C_{13}H_{20}N_2$. 4-Amino-1-phenyl-2,5-dimethylpiperidine, preparation, properties, action of HCl, 935.

$C_{13}H_{22}O$. 1) Dehydration product of 1,6-dihydroxy-1,6,9-trimethyldecalin, 646.
2) 6-Hydroxy-1,6,9-trimethyl-Δ'-octalin-preparation, 645.

$C_{13}H_{24}Si$. 1) Methyltri-(methylallyl)silane, preparation, properties, 990.
2) Triallylbutylsilane, preparation, properties, 537.

$C_{13}H_{26}O_2$. 1,6-Dihydroxy-1,6,9-trimethyldecalin, preparation, dehydration, 645.

$C_{13}H_{27}Cl$. Tributylmethyl chloride, preparation, properties, 947.

$C_{13}H_{30}Si$. Silicohydrocarbon, properties, 986.

13. III

$C_{13}H_{11}ON$. Benzanilide, preparation, 535.

$C_{13}H_{11}O_6N_3$. 2-(3',5'-Dinitrobenzoyl)-3,6-endo-ethyleno-3,6-dihydro-ortho-oxazine, preparation, 358.

$C_{13}H_{13}O_2N$. 1) 2-Benzoyl-3,6-endoethyleno-3,6-dihydro-ortho-oxazine, preparation, 358.
2) β-(β-Naphthyl)-β-alanine, preparation, properties, 126.

$C_{13}H_{12}O_6N_2$. 2-(3',5'-Dinitrobenzoyl)-4,5-dimethyl-3,6-dihydro-ortho-oxazine, preparation, 357.

$C_{13}H_{14}ON_2$. Amide of β-(β-naphthyl)-β-alanine, preparation, 128.

$C_{13}H_{15}ON$. Carbostyril propoxymethyl ether, preparation, hydrolysis, isomerization, 750.

$C_{13}H_{15}O_6N$. Reaction product of monoethyl malonate, piperonal, and ammonia, 639.

$C_{13}H_{16}O_2N_2$. 1-p-Nitroso-2,5-dimethyl-4-piperidone, preparation, hydrolysis, 934.

$C_{13}H_{16}N_4O_4$. 2,4-dinitrophenylhydrazone of 3-acetyl-1-methylcyclobutane, preparation, 320.

$C_{13}H_{17}ON$. 1) N-Crotyl-acet-p-toluidide, preparation, properties, oxidation, 610.
2) 3,6-Dihydro-4,5-dimethyl-2-(p-tolyl)-1,2,2H-oxazine, preparation, 541.
3) 5-Phenyl-2,6-dimethyl-4-piperidone, preparation, formation of hydrochloride, 926.
4) 1-Phenyl-2,5-dimethyl-4-piperidone, preparation, properties, 927.

$C_{13}H_{18}ON_2$. 1) 1-p-Aminophenyl-2,5-dimethyl-4-piperidone, preparation, properties, 935.
2) Oxime of 1-phenyl-2,5-dimethyl-4-piperidone, preparation, reduction, 935.

$C_{13}H_{19}O_4P$. Ethyl (2-methoxycarbonylpropyl)-phenyl phosphinate, preparation, properties, 805.

$C_{13}H_{21}O_2P$. Heptyl hydrogen phenylphosphonite, preparation, 805.

$C_{13}H_{22}N_2Cl_2$. 4-Amino-1-phenyl-2,5-dimethyl-piperidine dihydrochloride, preparation, 936.

$C_{13}H_{22}O_2N_2$. Disemicarbazone of tetrahydro-3,7a-dimethyl-1,5(4H)-indandione, preparation, 430.

$C_{13}H_{25}O_3P$. Dicyclohexyl methyl phosphite, preparation, properties, 726.

$C_{13}H_{27}O_4P$. Butyl (2-butoxycarbonylethyl)-phosphinate, preparation, properties, 806.

$C_{13}H_{29}O_3P$. 1) Dihexyl methylphosphonate, preparation, properties, 791.
2) Decyl ethyl methylphosphonate, preparation, properties, 792.

13. IV

$C_{13}H_{17}PN_6O_7$. 1) 2,4-Dinitrophenylhydrazone of 2,5-dimethyl-3-oxocyclopentylphosphonic acid, preparation, 521.
2) 2,4-Dinitrophenylhydrazone of 1-methyl-3-oxocyclohexylphosphonic acid, preparation, 521.

$C_{13}H_{18}ONCl$. 1) 5-Phenyl-2,6-dimethyl-4-piperidone hydrochloride, preparation, 926.
2) 1-Phenyl-2,5-dimethyl-4-piperidone hydrochloride, preparation, 928.

$C_{13}H_{28}O_4NP$. 1) N,N-Diethyl(dialkoxyphosphinyl) formamide derivative, dipole moments, 781.
2) N,N-Diethyl(dibutoxyphosphinyl) formamide, preparation, properties, 762.

13. VII

$C_{13}H_{17}PN_4O_7C_2H_5OH$. 2,4-Dinitrophenylhydrazone of 1-methyl-3-oxocyclohexylphosphonic acid, preparation, 521.

Group C_{14}

14. I

$C_{14}H_{10}$. Anthracene, relative activities of meso carbon atom in reactions with oxidizing agents, 135.

14. II

$C_{14}H_8Cl_2$. 9,10-Dichloranthracene, relative activities of the meso carbon atom in reactions with oxidizing agents, 135.

$C_{14}H_{12}O_2$. Methyl ester of β-(-naphthyl)-acrylic acid, preparation, 126.

$C_{14}H_{14}O$. Diphenyl acetal, preparation, properties, 960.

$C_{14}H_{22}O_2$. 1-Ethynylhexahydro-5-methoxy-3,7a-dimethyl-1-indanol, preparation, hydrogenation, 433.

$C_{14}H_{24}O_2$. Hexahydro-5-methoxy-3,7a-dimethyl-1-vinyl-1-indanol, preparation, 434.

$C_{14}H_{26}O_2$. Hydrogenation product of 1-ethynyl-1-hexahydro-5-methoxy-3,7a-dimethyl-1-indanol, 433.

$C_{14}H_{26}O_3$. Mono-butyl acetal of tetramethylbutindiol, preparation, hydrolysis, properties, 956.

$C_{14}H_{30}O_4$. Dibutyl acetal of ethylene glycol, preparation, properties, hydrolysis, 623.

$C_{14}H_{30}O_6$. Diethyltriacetal of ethylene glycol, preparation, properties, hydrolysis, 620.

$C_{14}H_{32}Si$. Ethyltributylsilane, preparation, properties, 596.

14. III

$C_{14}H_{12}O_2N_2$. 6-(β-Naphthyl)-dihydrouracil, preparation, properties, 288.

$C_{14}H_{13}O_2N_3$. β-Guanidino-β-(β-naphthyl)-propionic acid, preparation, properties, 290.

$C_{14}H_{14}O_3N_2$. β-Ureido-β-(β-naphthyl)-propionic acid, preparation, properties, 286.

$C_{14}H_{14}N_4O_4$. 2,4-Dinitrophenylhydrazone of hydrocarbon hydration product, 692.

$C_{14}H_{15}O_2N$. 1) Methyl ester of β-(β-naphthyl)-β-alanine, preparation, properties, 128.
2) N-methyl-β-(β-naphthyl)-β-alanine, preparation, properties, 129.

$C_{14}H_{15}O_2N_3$. β-Ureido-β-(β-naphthyl)-propionamide, preparation, 288.

$C_{14}H_{15}O_2P$. Diphenyl ethylphosphonite, preparation, properties, action of sulfur, cuprous iodide, 769.

$C_{14}H_{17}O_3N$. Diacetyl derivative of 4-anilinobut-2-en-1-ol, preparation, oxidation, properties, 342.

$C_{14}H_{19}ON$. 1) 5-Phenyl-1,2,6-trimethyl-4-piperidone, preparation, properties, 926.
2) 1-p-Tolyl-2,5-dimethyl-4-piperidone, preparation, properties, 929.

$C_{14}H_{19}O_2N$. 1-p-Methoxyphenyl-2,5-dimethyl-4-piperidone, preparation, properties, 930.

$C_{14}H_{21}ON_3$. Semicarbazone of 3a, 6, 7, 7a-tetrahydro-1, 3a-dimethyl-3-vinyl-5(4H)-indenone, preparation, 432.

$C_{14}H_{21}O_4P$. Ethyl (2-ethoxycarbonylpropyl)-phenylphosphinate, preparation, properties, 806.

$C_{14}H_{23}O_2N_3$. Semicarbazone of tetrahydro-1-hydroxy-3,7a-dimethyl-1-vinyl-6(5H)-indanone, preparation, 432.

$C_{14}H_{23}O_3P$. Octyl hydrogen phenylphosphonite, preparation, 805.

$C_{14}H_{24}N_2Cl_2$. 4-Methylamino-1-phenyl-2,5-dimethylpiperidine dihydrochloride, preparation, 936.

$C_{14}H_{27}O_3P$. Dicyclohexyl ethyl phosphite, preparation, properties, 726.

$C_{14}H_{27}O_7P$. Dimethyl dibutoxyphosphinylsuccinate, preparation, properties, 823.

$C_{14}H_{29}O_4P$. Butyl (2-butoxycarbonylpropyl)-ethylphosphinate, preparation, properties, 806.

$C_{14}H_{29}O_5P$. Hexyl β-diethylphosphoneisobutyrate, preparation, properties, 659.

$C_{14}H_{30}O_2S$. 1) α,β-Diisoamyloxydiethyl sulfide, properties, 462.
2) β,β'-Diisoamyloxydiethyl sulfide, properties, 462.

$C_{14}H_{30}O_2S_2$. bis(β-Isobutoxyethyl)mercaptal, preparation, properties, 461.

$C_{14}H_{31}O_2P$. Dihexyl ethylphosphonite, preparation, properties, 768.

$C_{14}H_{31}O_3P$. Ethyl hexyl hexylphosphonate, preparation, properties, 793.

$C_{14}H_{31}O_4N$. Reaction product from β-chloroethyl isopropyl acetal and ammonia, 189.

14. IV

$C_{14}H_{12}ON_2S$. 2-Thio-6-(β-naphthyl)-dihydrouracil, preparation, properties, 290.

$C_{14}H_{20}ONCl$. 1-p-Tolyl-2,5-dimethyl-4-piperidone hydrochloride, preparation, 929.

$C_{14}H_{20}O_2NCl$. 1-p-Methoxyphenyl-2,5-dimethyl-4-piperidone hydrochloride, preparation, 929.

$C_{14}H_{22}O_4NP$. p-Toluidine salt of 2,5-dimethyl-3-oxocyclopentylphosphonic acid, preparation, 520.

Group C_{15}

15. II

$C_{15}H_{20}Si$. Phenyltriallylsilane, preparation, properties, 595.

$C_{15}H_{22}O$. 1-(Cyclohex-1',3'-dienyl)-4-methyl-3-isopropylpent-1-yn-3-ol, preparation, properties, 692.

$C_{15}H_{22}O_5$. Dimethyl ester of 1,6-diketo-9-methyl-

5-carboxymethyl-Δ^5-octalin, preparation, hydrolysis, ozonation, 316.

$C_{15}H_{32}Si$. Allyltributylsilane, preparation, properties, 537; 595.

15. III

$C_{15}H_{11}O_2N$. N-Benzylisatin, preparation, 445.

$C_{15}H_{14}ON_2$. 4-Oxo-6-(β-naphthyl)-2-methyl-3,4,5,6-tetrahydropyrimidine, preparation, properties, 290.

$C_{15}H_{14}O_2N_2$. 6-(β-Naphthyl)-1-methyldihydrouracil, preparation, properties, 289.

$C_{15}H_{15}O_3N$. N-Acetyl-β-(β-naphthyl)-β-alanine, preparation, properties, 128.

$C_{15}H_{16}O_3N_2$. β-(N_1-methylureido)-β-(β-naphthyl)-propionic acid, preparation, 288.

$C_{15}H_{17}O_2N$. n-Butyl-α-naphthylurethane, preparation, 343.

$C_{15}H_{19}O_3N$. Diacetyl derivative of 4-p-tolylaminobut-2-en-1-ol, preparation, properties, oxidation, 609.

$C_{15}H_{22}ON_2$. 4-Acetamido-1-phenyl-2,5-dimethylpiperidine, preparation, 936.

$C_{15}H_{27}O_2P$. Nonyl hydrogen phenylphosphonite, preparation, 805.

$C_{15}H_{23}O_3N$. Dibenzoyl derivative of 4-p-tolylaminobut-2-en-1-ol, preparation, 609.

$C_{15}H_{23}O_4P$. 1) Ethyl (2-propoxycarbonylpropyl)-phenylphosphinate, preparation, properties, 806.
2) Isobutyl (2-methoxycarbonylpropyl) phenylphosphinate, preparation, properties, 806.

$C_{15}H_{29}O_3P$. Dibutyl 2-methyl-3-cyclohexenylphosphonate, preparation, properties, 816.

$C_{15}H_{31}O_5P$. Heptyl β-diethylphosphoneisobutyrate, preparation, properties, 659.

15. IV

$C_{15}H_{15}O_4N_3S$. p-Carbomethoxyaminophenylsulfonylhydrazone of benzaldehyde, preparation, 920.

$C_{15}H_{22}O_2NCl$. 1-p-Ethoxyphenyl-2,5-dimethyl-4-piperidone hydrochloride, preparation, 930.

$C_{15}H_{32}O_4NP$. 1) N,N-diethyl(dialkoxyphosphinyl) formamide derivative, dipole moments, 781.
2) N,N-Diethyl(diisopentyloxyphosphinyl)formamide, preparation, properties, 763.

$C_{15}H_{33}O_3TiCl$. Tri-isoamyloxy-titanium chloride, preparation, properties, 82.

15. V

$C_{15}H_{25}N_2O_2PS$. Phenyl hydrazone of diethyl 1-methyl-3-oxobutyl-phosphonothionate, preparation, 827.

Group C_{16}

16. II

$C_{16}H_{18}Si$. Diphenylallylmethylsilane, preparation, properties, 595.

$C_{16}H_{24}O_7$. Tricarboxylic acid obtained from condensation of 1-carbomethoxy-1-methylcyclohex-2-en-4-one with malonic ester, 647.

$C_{16}H_{28}Si$. Tetra-(methylallyl)-silane, preparation, properties, 990.

$C_{16}H_{28}O_6$. Cyclic ester of triethylene glycol with sebacic acid, preparation, 779.

$C_{16}H_{30}O_4$. Diethylacetal of tetramethylbutindiol, preparation, properties, hydrolysis, 957.

16. III

$C_{16}H_{10}O_3N_2$. 4-Piperonyl-2-imidazolidone, preparation, 853.

$C_{16}H_{13}NO$. Benzylcarbostyril, preparation, hydrolysis, isomerization, 751.

$C_{16}H_{13}O_2N$. (p-Tolylmethyl)-isatin, preparation, 446.

$C_{16}H_{13}O_3N$. Diacetyl derivative of 2,3-dimethyl-4-phenylamino-2-buten-1-ol, preparation, properties, 541.

$C_{16}H_{13}O_4N_3$. 3-Benzoyl-4-(m-nitrophenyl)-2-imidazolidone, preparation, action of KOH, 852.

$C_{16}H_{14}O_2N_2$. 3-Benzoyl-4-phenyl-2-imidazolidone, preparation, hydrolysis, 850.

$C_{16}H_{14}O_5N_2$. N-Benzoyl-β-(m-nitrophenyl)-β-alanine, preparation, formation of ethyl ester, hydrazide, azide, 850.

$C_{16}H_{15}ON$. 3,6-Dihydro-2,6 (or 2,3)-diphenyl-1,2,2H-oxazine, preparation, 541.

$C_{16}H_{16}O_4N_4$. N-Benzoyl-β-(m-nitrophenyl)-β-alanine, hydrazide, preparation, properties, 851.

$C_{16}H_{17}O_2N_3$. N-benzoyl-β-phenyl-β-alanine, hydrazide, preparation, properties, 848.

$C_{16}H_{18}O_2N_4$. β-(m-Aminophenyl)-N-benzoyl-β-alanine hydrazide, preparation, 851.

$C_{16}H_{19}O_3N$. Diacetyl derivative of 4-anilino-cyclohex-2-en-ol, preparation, 615.

$C_{16}H_{19}O_3P$. bis(β-Phenylethyl)-phosphorous acid,

preparation, properties, 487.

$C_{16}H_{20}ON_2$. β-Benzamido-β-cyclohexylpropionamide, preparation, properties, 297.

$C_{16}H_{20}O_2N_2$. 1-Benzoyl-5-cyclohexylglyoxalidone, preparation, 298.

$C_{16}H_{21}ON$. 1-Phenyl-2-methyl-4-ketodecahydroquinoline, preparation, 931.

$C_{16}H_{21}O_3N$. 1) β-Benzamido-β-cyclohexylpropionic acid, preparation, properties, 296.

2) Diacetyl derivative of 4-anilinocyclohexan-1-ol, preparation, 616.

$C_{16}H_{26}N_2O_4$. Product of reaction of vinylcaprolactam with hydrogen peroxide, 631.

$C_{16}H_{31}O_3P$. Butyl dicyclohexyl phosphite, preparation, properties, 727.

$C_{16}H_{31}O_7P$. Diethyl dibutoxyphosphinyl-succinate, preparation, properties, 824.

$C_{16}H_{32}O_{10}P_2$ Diethyl bis(diethoxyphosphinyl) succinate, preparation, properties, 824.

$C_{16}H_{33}O_5P$. Octyl β-diethylphosphoneisobutyrate, preparation, properties, 659.

$C_{16}H_{34}O_2S_2$. bis(β-Isoamyloxyethyl) mercaptal, preparation, properties, 463.

$C_{16}H_{35}O_4N$. Bis-α-(isobutoxyethyl) ether of diethanolamine, preparation, properties, 190.

16. IV

$C_{16}H_{14}NClO_4$. N-Phenylquinaldine perchlorate, preparation, properties, 353.

$C_{16}H_{18}O_2N_3Cl$. Hydrochloride of N-benzoyl-β-phenyl-β-alanine hydrazide, preparation, properties, preparation of azide, 849.

$C_{16}H_{22}ONCl$. 1-Phenyl-2-methyl-4-keto-decahydroquinoline hydrochloride, preparation, 931.

16. V

$C_{16}H_{27}O_2N_2PS$. Phenylhydrazone of diethyl 1,1-dimethyl-3-oxobutylphosphonothionate, preparation, 828.

Group C_{17}

17. I

$C_{17}H_{36}$. Tetrabutylmethane, preparation, properties, 947.

17. II

$C_{17}H_{17}N$. Benzoyl derivative of N-2-butenylaniline, preparation, hydrolysis, 534.

$C_{17}H_{20}O_4$. Tricyclic fluorenedicarboxylic acid anhydride, preparation, hydrolysis, 433.

$C_{17}H_{22}O_5$. 1,2,3,4b,5,6,7,8,8a,9a-Decahydro-4b,9-dimethyl-6-oxofluorene-1,2-dicarboxylic acid, preparation, 433.

17. III

$C_{17}H_{14}O_4N_2$. 3-Benzoyl-4-piperonyl-2-imidazolidone, preparation, hydrolysis, 853.

$C_{17}H_{15}ON$. (p-Tolylmethyl)carbostyril, preparation, hydrolysis, isomerization, 751.

$C_{17}H_{17}ON$. 1) N-2-butenylbenzanilide, preparation, hydrolysis, 528.

2) 3,6-Dihydro-2-phenyl-6(or 3)-(o-tolyl)-1,2,2H-oxazine, preparation, 541.

3) 3,6-Dihydro-2-phenyl-6(or 3)-(p-tolyl)-1,2,2H-oxazine, preparation, 541.

$C_{17}H_{17}O_4N_3$. N-Benzoyl-β-piperonyl-β-alanine hydrazide, preparation, 852.

$C_{17}H_{19}ON$. N-n-butylbenzanilide, preparation, 344.

$C_{17}H_{23}O_2N$. 1-p-Methoxyphenyl-2-methyl-4-keto-decahydroquinoline, preparation, 931.

$C_{17}H_{27}O_4P$. Hexyl (2-methoxycarbonylpropyl)-phenylphosphinate, preparation, properties, 806.

$C_{17}H_{35}O_5P$. 1) Methyl-β-dihexylphosphoneisobutyrate, preparation, properties, 658.

2) Nonyl β-diethylphosphoneisobutyrate, preparation, properties, 660.

$C_{17}H_{37}O_3P$. Dioctyl methylphosphonate, preparation, properties, 791.

17. IV

$C_{17}H_{16}NClO_4$. N-Phenyl-6-methylquinaldine perchlorate, preparation, 353.

$C_{17}H_{24}O_2NCl$. 1-p-Methoxyphenyl-2-methyl-4-keto-decahydroquinoline hydrochloride, preparation, action of ammonia, 931.

$C_{17}H_{36}O_4NP$. 1) N,N-Diethyl(dihexylphosphinyl) formamide, preparation, properties, 763.

2) N,N-Diethyl(dialkoxyphosphinyl)formamide derivative, dipole moments, 781.

Group C_{18}

18.II

$C_{18}H_{24}O_4$. Tricyclic fluorenecarboxylic anhydride obtained by condensation of 3a,4,5,6,7,7a-hexahydro-6-methoxy-1,3a-dimethyl-3-vinylindene with maleic anhydride, 434.

$C_{18}H_{26}O_5$. 1,2,3,4b,5,6,7,8,8a,9a-Decahydro-7-methoxy-4b,9-dimethylfluorene-1,2-dicarboxylic acid, preparation, 434.

$C_{18}H_{28}O_2$. Compound obtained by reaction of 1-decalone with 1-acetyl-1-cylcohexene, 425.

$C_{18}H_{34}O_3$. Monooctyl acetal of tetramethylbutindiol, preparation, properties, hydrolysis, 957.

18. III

$C_{18}H_{19}O_3N$. Ethyl ester of N-benzoyl-β-phenyl-β-alanine, preparation, 640.

$C_{18}H_{18}O_5N_2$. Ethyl ester of N-benzoyl-β-(m-nitrophenyl)-β-alanine, preparation, 851.

$C_{18}H_{18}O_8N_4$. Picrate of 4-anilinocyclohex-2-en-1-ol, preparation, 615.

$C_{18}H_{19}ON$. N-Crotyl-benz-p-toluidide, preparation, properties, 610.

$C_{18}H_{20}O_3N_2$. Ethyl ester of 2-benzamido-2-phenylethylcarbamic acid, preparation, 850.

$C_{18}H_{23}ON$. 1,2,3,4,4a,6a,7,8,9,10-decahydro-6-phenyl-6H-dibenz[c, e]-o-oxazine, preparation, 541.

$C_{18}H_{33}O_3P$. Tricyclohexyl phosphite, preparation, 725.

$C_{18}H_{39}O_2P$. Dioctyl ethylphosphonite, preparation, properties, 768.

$C_{18}H_{39}O_3P$. 1) Dinonylphosphorous acid, preparation, properties, 487.

2) Ethyl octyl octylphosphonate, preparation, properties, 793.

3) Dihexyl hexylphosphonate, preparation, properties, 793.

$C_{18}H_{40}O_6P_2$. Tetrabutyl 1,2-ethyldiphosphonate preparation, properties, 814.

18. IV

$C_{18}H_{18}NClO_4$. N-(p-Tolyl)-6-methylquinaldine perchlorate, preparation, 353.

$C_{18}H_{39}O_3TiCl$. Tri-n-hexyloxytitanium chloride, preparation, properties, 84.

18. V

$C_{18}H_{15}O_2PAuCl$. Complex compound of triphenyl phosphite with aurous chloride, preparation, 734.

$C_{18}H_{15}O_3PAuCl$. Complex compound of triphenyl phosphite with aurous chloride, preparation, 734.

$C_{18}H_{30}O_6P_2PtCl_2$. Product of reaction of triphenyl phosphite with platinous chloride, 740.

$C_{18}H_{42}O_6P_2PtCl_2$. Product of reaction of platinous chloride with triisopropyl phosphite, 740.

$C_{18}H_{42}O_6P_2PtI_2$. Product of reaction of potassium iodide with $PtCl_2 \cdot 2P(OC_3H_7\text{-}i)_3$, 741.

Group C_{19}

19. I

$C_{19}H_{38}$. 7-Hexyltridec-6-ene, preparation, properties, 947.

19. II

$C_{19}H_{22}O_3$. Tetracyclic triketone obtained by condensation of 3a,4,7,7a-tetrahydro-1,3a-dimethyl-3-vinyl-6(5H)-indenone with p-quinone, 432.

$C_{19}H_{22}O_4$. Diethylacetal of ethylene glycol, preparation, hydrolysis, properties, 620.

$C_{19}H_{22}O_5$. β-Hydroxyethyl-β-ethoxyethylideneoxyethylacetal, preparation, properties, 620.

$C_{19}H_{26}O_2$. Tetracyclic diketone obtained by condensation of 3a,4,7,7a-tetrahydro-1,3a-dimethyl-3-vinyl-6(5H)-indenone with 2-methyl-2-cyclopenten-1-one, 431.

$C_{19}H_{28}O_2$. 1) Compound obtained by reaction of 3a,4,7,7a-tetrahydro-3, 7a-dimethyl-1-indanone with 1-acetyl-1-cyclohexene, 425.

2) Compound obtained by the reaction of 8a-methyl-1-octalone with 1-acetyl-1-cyclohexene, 425.

3) Hydrogenation product of tetracyclic diketone obtained by condensation of 3a,4,7,7a-tetrahydro-1,3a-dimethyl-3-vinyl-6(5H)-indenone with 2-methyl-2-cyclopenten-1-one, 431.

$C_{19}H_{20}Si$. Triallyl-α-naphthylsilane, preparation, 537.

$C_{19}H_{39}Cl$. Tri-n-hexylmethyl chloride, preparation, properties, 947.

$C_{19}H_{40}O$. Tri-n-hexylcarbinol, preparation, 947.

$C_{19}H_{42}Si$. Silicohydrocarbon, properties, 986.

19. III

$C_{19}H_{19}ON$. Benzoyl derivative of 3-anilinocyclohex-1-ene, preparation, 616.

$C_{19}H_{19}O_5N$. Ethyl ester of N-benzoyl-β-piperonyl-β-alanine, preparation, formation of hydrazide, azide, 852.

$C_{19}H_{20}O_8N_4$. Picrate of 1-phenyl-2,5-dimethyl-4-piperidone, preparation, 928.

$C_{19}H_{25}ON$. 1,2,3,4,4a,6a,7,8,9,10-Decahydro-6-(p-tolyl)-6H-dibenz [c,e]-o-oxazine, preparation, 542.

$C_{19}H_{29}O_3P$. Benzyl dicyclohexyl phosphite, preparation, properties, 727.

$C_{19}H_{39}O_5P$. Methyl β-diheptylphosphoneisobutyrate,

preparation, 659.

19. IV.

$C_{19}H_{12}O_3Na_2P$. Sodium salt of 7-benz[a]anthracenemethane phosphonic acid, preparation, 132.

$C_{19}H_{19}O_5N_3S$. Hydrazone of acetoacetic ester derived from the hydrazide of p-acetaminobenzenesulfonic acid, preparation, 921.

$C_{19}H_{21}O_6N_3S$. Product of reaction of methyl p-carbomethoxybenzenesulfonate and phenylmethylpyrazolone, 920.

$C_{19}H_{22}N_5O_4Cl$. Hydrochloride of dinitrophenylhydrazone of 1-phenyl-2,5-dimethyl-4-piperidone, preparation, 929.

19. V

$C_{19}H_{20}O_4N_3SNa$. Sodium 4-(2,5-dimethyl-4-ketopiperidino)-azobenzene-4'-sulfonate, preparation, 935.

Group C_{20}

20. II

$C_{20}H_{26}O_3$. Tetracyclic diketone obtained by condensation of 3a, 4,5,6,7,7a-hexahydro-6-methoxy-1,3a-dimethyl-3-vinylindene with p-quinone, 434.

$C_{20}H_{28}O_2$. Tetracyclic diketone obtained by condensation of 3a,4,7,7a-tetrahydro-1,3a-dimethyl-3-vinyl-6(5H)-indenone with 2-methyl-2-cyclohexen-1-one, 431.

$C_{20}H_{32}O_2$. Hydrogenation product of tetracyclic diketone obtained by condensation of 3a,4,7,7a-tetrahydro-1,3a-dimethyl-3-vinyl-6(5H)-indenone with 2-methyl-2-cyclohexen-1-one, 431.

$C_{20}H_{38}O_4$. Dibutyl acetal of tetramethylbutindiol, preparation, properties, hydrolysis, 956.

20. III

$C_{20}H_{16}O_2N_2$. 3-Phenyl-6-(β-naphthyl)-dihydrouracil, preparation, properties, 289.

$C_{20}H_{17}O_3N$. N-Benzoyl-β-(β-naphthyl)-β-alanine, preparation, properties, 128.

$C_{20}H_{18}O_3N_2$. β-(ω-Phenylureido)-β-(β-naphthyl)-propionic acid, preparation, properties, 288.

$C_{20}H_{22}ON_2$. 1-p-Benzylideneaminophenyl-2,5-dimethyl-4-piperidone, preparation, 935.

$C_{20}H_{22}O_8N_4$. Picrate of 5-phenyl-1,2,6-trimethyl-4-piperidone, preparation, 927.

$C_{20}H_{24}O_9N_4$. Picrate of β-anilinopropyl β-methoxyisopropyl ketone, preparation, 928.

$C_{20}H_{43}O_3P$. Didecylphosphorous acid, preparation, properties, 487.

$C_{20}H_{44}SiO$. Ethoxytrihexylsilane, preparation, properties, 948.

20. IV

$C_{20}H_{16}NClO_4$. N-α-Naphthylquinaldine perchlorate, preparation, 354.

$C_{20}H_{23}ON_2P$. 12-Methyl-7-benz[a]-anthracenemethanephosphonic acid, preparation, 132.

$C_{20}H_{24}O_6N_5Cl$. Dinitrophenylhydrazone of 1-p-methoxy-2,5-dimethyl-4-piperidone, preparation, 930.

Group C_{21}

21. II

$C_{21}H_{18}O$. 3,3-Diphenyl-1-(cyclohexa-1'-3'-dienyl)-prop-1-yn-3-ol, preparation, properties, 692.

$C_{21}H_{32}O_2$. Tetracyclic ketone obtained by condensation of 3a,4,5,6,7,7a-hexahydro-6-methoxy-1,3a-dimethyl-3-vinylindene with 2-methyl-2-cyclohexen-1-one, 434.

21. III

$C_{21}H_{18}NI$. 1) N-(α-Naphthyl)-6-methylquinaldine iodide, preparation, 353.
2) N-(o-Tolyl)-5,6-benzoquinaldine iodide, preparation, 354.

$C_{21}H_{20}O_2N_2$. Anilide of N-acetyl-β-(β-naphthyl)-β-alanine, preparation, properties, 129.

$C_{21}H_{20}O_3N_2$. Methyl-β-(ω-phenylureido)-β-(β-naphthyl)-2-propionate, preparation, properties, 289.

$C_{21}H_{23}O_8N_5$. Monopicrate of 1-α-pyridyl-2-methyl-4-ketodecahydroquinoline, preparation, 931.

$C_{21}H_{24}O_8N_4$. 5-Phenyl-2,6-dimethyl-1-ethyl-4-piperidone, preparation, 927.

$C_{21}H_{28}O_3N_6$. Disemicarbazone of tetracyclic triketone obtained by condensation of 3a,4,7,7a-tetrahydro-1,3a-dimethyl-3-vinyl-6(5H)-indenone with p-quinone, 432.

$C_{21}H_{32}O_2N_6$. Disemicarbazone obtained from tetracyclic diketone from condensation of 3a,4,7,7a-tetrahydro-1,3a-dimethyl-3-vinyl-6(5H)-indenone with 2-methyl-2-cyclopenten-1-one, 431.

$C_{21}H_{43}O_5P$. Methyl-β-diocytlphosphoneisobutyrate, preparation, properties, 659.

$C_{21}H_{45}O_3P$. Didecyl methylphosphonate, preparation, properties, 792.

$C_{21}H_{45}O_6N$. Reaction product from β-chloroethyliso-propyl acetal and ammonia, 190.

21. IV

$C_{21}H_{18}NClO_4$. N-(o-Tolyl)-7,8-benzoquinaldine perchlorate, preparation, 354.

$C_{21}H_{19}PS_2O$. Reaction product of ethylene-o-methyl phosphorodithioite and triphenylmethyl bromide, 440.

Group C_{22}

22. III

$C_{22}H_{21}O_3P$. Product of reaction of trimethylene phosphite and bromotriphenylmethane, 710.

22. IV

$C_{22}H_{22}O_3PBr$. Product of reaction of bromotriphenylmethane on ethylene methyl phosphite, 701.

Group C_{23}

23. III

$C_{23}H_{23}O_3P$. Ester of glycolphosphorous acid, preparation, 710.

Group C_{24}

24. II

$C_{24}H_{52}Si$. Tetrahexylsilane, preparation, properties, 947.

$C_{24}H_{54}Si_2$. 1,8-Di-(triethylsilyl)-2,4,3,7-tetramethyl-octane, preparation, properties, 597.

24. III

$C_{24}H_{18}NI$. N-β-Naphthyl-5,6-benzoquinaldine iodide, preparation, 354.

$C_{24}H_{21}O_3N$. 1) Benzoyl derivative of 4-anilinobut-2-en-1-ol, preparation, 342.

2) Dibenzoyl derivative of 4-phenylamino-2-buten-1-ol, preparation, 527.

$C_{24}H_{51}O_3P$. Dioctyl octylphosphonate, preparation, properties, 794.

$C_{24}H_{51}O_6N$. Tris(α-isobutylethyl) ether of triethanolamine, preparation, properties, 191.

24. IV

$C_{24}H_{16}OBr_4As_2$. Product of reaction of potassium p-bromophenylazocarboxylate with arsenic trichloride, 914.

Group C_{25}

25. III

$C_{25}H_{32}O_5N_4$. 1) 2,4-Dinitrophenylhydrazone of compound obtained by reaction of 8a-methyl-1-octalone with 1-acetyl-1-cyclohexene, 425.

2) 2,4-Dinitrophenylhydrazone of compound obtained by reaction of 3a,4,7,7a-tetrahydro-3,7a-dimethyl-1-indanone with 1-acetyl-1-cyclohexene, 425.

25. IV

$C_{25}H_{28}O_3PBr$. Product of reaction of butyl ethylene phosphite and bromotriphenylmethane, 703.

Group C_{27}

27. III

$C_{27}H_{24}N_4O_5$. 2,4-Dinitrophenylhydrazone of 3,3-diphenyl-1-(cyclohexa-1',3'-dienyl)-prop-1-yn-3-ol, 693.

$C_{27}H_{57}O_3B$. Trinonyl borate, preparation, properties, 778.

$C_{27}H_{57}O_3P$. Dinonyl nonylphosphonate, preparation, properties, 794.

27. IV.

$C_{27}H_{23}N_2ClO_4$. [2-(1-Phenylquinoline)][2-(3-ethylbenzothiazole)]trimethinecyanine perchlorate, preparation, 499.

$C_{27}H_{32}O_3PBr$. Ester of glycolphosphorous acid, preparation, 710.

Group C_{28}

28. II

$C_{28}H_{54}O_3$. Dioctyl acetal of tetramethylbutindiol, preparation, properties, hydrolysis, 957.

28. III

$C_{28}H_{21}ON$. (Triphenylmethyl) carbostyril, preparation, hydrolysis, isomerization, 750.

$C_{28}H_{28}As_2O$. Product of reaction of potassium p-tolylazocarboxylate with arsenic trichloride, 914.

28. IV

$C_{28}H_{25}N_2ClO_4$. [2-(6-Methyl-1-phenylquinoline)]-[2-(3-ethylbenzothiazole)]trimethinecyanine perchlorate, preparation, 501.

Group C_{29}

29. IV

$C_{29}H_{27}N_2ClO_4$. 1) [2-(6-Methyl-1-p-tolylquinoline]-[2-(3-ethylbenzothiazole)]trimethinecyanine perchlorate, preparation, 502.

2) (1-Phenyl-quinoline-2)-(1,3,3-trimethylindolenine-2)-trimethinecyanine perchlorate, preparation, 670.

Group C_{30}

30. I

$C_{30}H_{30}$. 1) 1,1,6,6,-Tetraphenylhexane, 994.

2) Product of hydrogenolysis of dibenzhydrylthiophen, 994.

30. III

$C_{30}H_{23}BrS$. Bromodibenzhydrylthiophen, preparation, properties, oxidation, 994.

$C_{30}H_{24}O_2S$. 2,5-Dibenzhydrylthiophen-1,1-oxide, preparation, properties, reduction, bromination, 994.

$C_{30}H_{36}O_3N_8$. Bis(2,4-dinitrophenylhydrazone) of compound obtained by reaction of 1-decalone with 1-acetyl-1-cyclo-hexene, 425.

$C_{30}H_{63}O_3P$. Didecyl decylphosphonate, preparation, properties, 794.

30. IV

$C_{30}H_{24}Br_2O_2S$. Bromination product of 2,5-dibenzhydrylthiophen-1,1-dioxide, preparation, properties, 995.

$C_{30}H_{29}N_2O_4Cl$. (1-Phenyl-6-methylquinoline-2)-(1,3,3-trimethylindolenine-2)-trimethinecyanine perchlorate, preparation, 670.

Group C_{31}

31. III

$C_{31}H_{30}O_3N_4$. Product of hydrolysis of 3-benzoyl-4-phenyl-2-imidazolidone, 850.

31. IV

$C_{31}H_{25}O_4N_2Cl$. 1) [2-(1-(1-Naphthyl)quinoline)] [2-(3-ethylbenzothiazole)] trimethinecyanine perchlorate, preparation, 502.

2) [3-(4-Phenylbenzo[f]quinoline)] [2-(3-ethylbenzothiazole)]trimethinecyanine perchlorate, preparation, 502.

$C_{31}H_{31}N_2O_4Cl$. (1-p-Tolyl-6-methyl-quinoline-2)-(1,3,3-trimethylindolenine-2)-trimethinecyanine perchlorate, preparation, 670.

Group C_{32}

32. III

$C_{32}H_{27}N_2I$. [2-(6-Methyl-1-(1-naphthyl)quinoline)] [2-(3-ethylbenzothiazole)]-trimethinecyanine iodide, preparation, 502.

$C_{32}H_{67}O_3P$. Dihexadecylphosphorous acid, preparation, 487.

32. IV

$C_{32}H_{27}O_4N_2Cl$. 1) [3-(4-o-Tolylbenzo[f]quinoline)] [2-(3-ethylbenzothiazole)]trimethinecyanine perchlorate, preparation, 503.

2) [2-(1-o-Tolylbenzo[h]quinoline)] [2-(3-ethylbenzothiazole)]trimethinecyanine perchlorate, preparation, 502.

Group C_{33}

33. IV

$C_{33}H_{25}N_2O_4Cl$. Bis-2-(1-Phenylquinoline)-trimethinecyanine perchlorate, preparation, 494.

$C_{33}H_{29}O_4N_2Cl$. 1) (1-α-Naphthylquinoline-2)-(1,3,3-trimethylindolenine-2)-trimethinecyanine perchlorate, preparation, 671.

2) (1-Phenyl-5,6-benzoquinoline-2)-(1,3,3-trimethylindolenine-2)-trimethinecyanine perchlorate, preparation, 670.

$C_{33}H_{35}N_2O_4Cl$. [Bis-2-(6-methyl-1-p-tolylquinoline)]-β-methyltrimethinecyanine perchlorate, preparation, 495.

Group C_{34}

34. IV

$C_{34}H_{27}N_2O_4Cl$. [Bis-2-(1-phenylquinoline)]-β-methyltrimethinecyanine perchlorate, preparation, 494.

$C_{34}H_{31}O_4N_2Cl$. 1) (1-α-Naphthyl-6-methylquinoline-2)-(1,3,3-trimethylindolenine-2)-trimethinecyanine perchlorate, preparation, 670.

2) (1-o-Tolyl-7,8-benzoquinoline-2)-(1,3,3-trimethylindolenine-2)-trimethinecyanine perchlorate, preparation, 670.

3) (1-p-Tolyl-5,6-benzoquinoline-2)-(1,3,3-trimethylindolenine-2)-trimethinecyanine perchlorate, preparation, 671.

Group C_{35}

35. III

$C_{35}H_{27}N_2I$. [3-(4-(2-Naphthyl)benzo[f]quinoline)] [2-(3-ethylbenzothiazole)]trimethinecyanine iodide, preparation, 503.

35. IV

$C_{35}H_{29}N_2O_4Cl$. Bis-2-(6-methyl-1-phenylquinoline) trimethinecyanine perchlorate, preparation, 495.

Group C_{36}

36. III

$C_{36}H_{78}Si_2O$. Hexahexyldisiloxane, preparation properties, 947.

36. V.

$C_{36}H_{30}O_6P_2PtCl_2$. Product of reaction of triphenyl phosphite with platinous chloride, 741.

$C_{36}H_{66}O_6P_2CuBr$. Cuprous bromide compound of tricyclohexyl phosphite, preparation, 726.

Group C_{37}

37. III

$C_{37}H_{31}N_2I$. (1-β-Naphthyl-5,6-benzoquinoline-2)-(1,3,3-trimethylindolenine-2)-trimethinecyanine iodide, preparation, 671.

37. IV

$C_{37}H_{33}N_2O_4Cl$. Bis-2-(6-methyl-1-p-tolylquinoline) trimethinecyanine perchlorate, preparation, 495.

Group C_{41}

41. IV

$C_{41}H_{29}O_4N_2Cl$. 1) Bis-2-[1-(-naphthyl)-quinoline] trimethinecyanine perchlorate, preparation, 495.
2) Bis-3-[4-phenylbenzo[f]quinoline] trimethinecyanine perchlorate, preparation, 496.

Group C_{43}

43. III

$C_{43}H_{33}N_2I$. Bis-3-[4-o-Tolylbenzo[f] quinoline] trimethinecyanine iodide, preparation, 496.

43. IV

$C_{43}H_{33}O_4N_2Cl$. 1) Bis-2-[6-Methyl-1-(1-naphthyl)-quinoline]trimethinecyanine perchlorate, preparation, 495.
2) Bis-2-[1-o-tolylbenzo[h]quinoline] trimethinecyanine perchlorate, preparation, 496.

Group C_{44}

44. IV

$C_{44}H_{35}N_2O_4Cl$. [Bis-2-(6-methyl-1-(naphthyl)quinoline)]-β-methyltrimethinecyanine perchlorate, preparation, 495.

Group C_{48}

48. III

$C_{48}H_{99}O_3B$. Trihexadecyl borate, preparation, 483.

$C_{48}H_{99}O_3P$. Trihexadecyl phosphite, preparation, 483.

$C_{48}H_{102}OSi_2$. Hexaoctyldisiloxane, preparation, properties, 948.

Group C_{49}

49. III

$C_{49}H_{33}N_2I$. Bis-3-[4-(2-naphthyl)benzo[f]quinoline] trimethinecyanine iodide, preparation, 496.

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